



INSIDE DOPE

by GEORGE E. TAUBENECK

Story of the Week

Frank Shumann's Public Service
High Cost of Housing

Story of the Week

"Frankly, dear, I'm looking for a husband," gushed the maiden at a bridge-luncheon.

"So am I, cutie," grimaced her partner.

"Why, dar-r-ling, I thought you had a husband!"

"Yes, I'm supposed to; but I spend a lot of time looking for him!"

Frank Shumann's Public Service

Free education in business for boys of high school age will be offered this summer by Lehigh Foundries, Inc., under the sponsorship of President Frank E. Shumann. A limited number of college scholarships will be granted on the basis of work done during the course.

Duplicate courses of three weeks duration are offered by this public-spirited citizen. Phases of business which will be covered in these courses include the following subjects: "principles behind employment," "following a customer's inquiry," "a study of management," "safety regulations," "advertising and sales planning," and "accounting methods and credit analysis."

The instruction will be supervised by Merrill Cassebaum, director of extension education at Easton High School, Easton, Pa. He will be assisted by executives and department heads of Lehigh Foundries, and by a selected group of college student counsellors. Plans call for the assignment of one counselor to every four pupils.

In announcing this unusual educational enterprise, Mr. Shumann declares that its purpose is "to create mutual understanding of each other's problems." He continues: "The boys who spend this time observing 'industry at work' will have a better understanding of the problems that affect the normal interchange of ideas and commodities throughout the world."

"We in industry are well aware of the need for this sharing of mature experience and knowledge with those who later will take over the reins of industry, finance, and professions. And it is our belief that boys in their late teens are at their best and most receptive age for such an experience."

Mr. Shumann emphasizes that it is not his intention to train boys for positions with Lehigh Foundries. "There are no strings attached," he insists. "All we expect from the student is sincere interest, cooperation, and ability to profit from the course. All expenses are being borne by a non-commercial foundation sponsored by Lehigh Foundries, Inc."

(Incidentally, this foundation is dedicated to Frank E. Shumann, Jr., who was killed in action in World War II.)

Lectures and demonstrations will cover such points as office procedure, production scheduling, plans and engineering, laboratory analysis and development, mechanical and foundry operations, inspection and testing, employment interviews, employer-employee relations, pay plans, promotion methods, management organization, dispensary and compensation laws, advertising, and accounting.

To our way of thinking this sort of thing is an investment in the future of America.

High Cost of Housing

To fulfill America's present housing needs in the next few years would require a capital expenditure of

(Concluded on Page 8, Column 3)

Coal Wage Boost Will Probably Up Steel Product Price

WASHINGTON, D. C.—The recent wage boost for coal miners is apt to inflate the price of steel several dollars per ton. A consensus of steel officials estimated the new price would be between \$2-\$5 more per ton. They express serious doubt that present steel price levels can be maintained very long, if an anticipated increase in coal prices goes through. The implication is clear: if steel goes up, so will other items.

One top steel official was queried on whether steel firms were consid-

(Concluded on Page 32, Column 1)

Industry Meets To Set Condensing Unit Code

HERSHEY, Pa.—Representatives from the entire refrigeration compressor industry met here for the first time in the industry's history on June 30 and July 1 for the purpose of setting up a voluntary code of refrigeration industry standards covering condensing units up to and including 5 hp. The men who met were members of the Industry Joint Engineering Committee.

Frank K. Smith, sales manager,

(Concluded on Page 4, Column 4)

Frigidaire To Limit Dealers for a Time

NEW YORK CITY—Frigidaire, as a general practice, will add no new appliance dealers until supply equals demand, L. A. Clark, assistant general sales manager, declared during a recent press conference here.

Stating that when allocations of merchandise were terminated, some increase in the number of dealers would be a "natural development," Mr. Clark pointed out that even then company policy would be to maintain a comparatively select dealer group.

Philco Gives Data on New Refrigerator

PHILADELPHIA—A new "Advanced Design" 7.3 cu. ft. refrigerator, claimed by the company to be "one of the most useful ever designed," is Philco's newest model.

Known as the model 773, and priced at \$294.50 f.o.b., it has:

A "Summer-Winter" control intended to hold perishable foods at the "best" temperature and humidity. More than 14 different shelf arrangements. More than 14 shelf arrangements.

A freezer locker that will hold 32 lbs. of frozen foods and that stores ice cube trays containing 56 cubes. The door to this compartment is said

(Concluded on Page 20, Column 5)

Raytheon Turns Out New Home 'Precipitator'

WALTHAM, Mass.—A new home precipitator, which is claimed to remove electronically more than 90% of airborne dirt when used in connection with an air conditioning unit or warm air furnace, is being introduced by the Raytheon Mfg. Co. here.

The unit is currently being made available to air conditioning manufacturers for distribution through their dealers, who are offering it at approximately \$550.

The home precipitator will remove dirt, dust, and soot, and also microscopic particles of smoke and pollen

(Concluded on Page 21, Column 2)

New Models Scarce at Mart; Appliance Demand Holding Up

Prices May Go Up Instead of Down, Buyers Told

By John O. Sweet

CHICAGO—Buyers and dealers looking over the major appliance and refrigeration exhibit at the current home furnishings market here are finding only a few brand-new models.

Among products being shown for the first time is Norge's two-broiler gas range, described as "an innovation in the household appliance field," and its divided-top electric range. Three gas and two electric models make up the new line, which were to be available to the public soon.

Pressed Steel Car Co.'s Domestic Appliance Div. is introducing its 1948 line of four electric ranges. This line, which is not yet in production, consists of the Deluxe "4," Deluxe "6," Custom "8," and the "Budget."

On display in the Estate space are three 1948 chest-type home freezers in 6, 8, and 20-cu. ft. size.

Philco is showing market visitors a new addition to its refrigerator line—a 7-cu. ft. model (B-773) containing several new features. A spokesman said the unit is the first produced in Philco's new Philadelphia plant and is now being shipped to dealers and distributors. It will retail for \$294.50.

Visitors to the Philco exhibit are also seeing the company's radios and phonographs for 1948. The concern will announce a new television console set soon, it was reported.

Demonstrations of its new automatic washer, dryer, and electric ironer are being conducted by Frigidaire, which is just completing their introduction to dealers. Prices of the units are, respectively, \$299.75, \$229.75, and \$189.75.

Another new product getting its first public showing is Ben-Hur Mfg. Co.'s compact 9-cu. ft. farm and home freezer, which uses a horizontal refrigerating unit. Production has just begun on a standard version, with the deluxe type to follow later.

Sanitary Refrigerator Co. is announcing re-introduction of its popular prewar model 1144 Trizone Quicfrez. This 10-cu. ft. unit has separate freezing, frozen storage, and normal temperature compartments.

Another re-introduction is being announced by Coolerator, which will resume production in August on an 8½-cu. ft. electric refrigerator known as Model DR-85.

Admiral Corp. is showing a dual-temperature refrigerator equipped with a new device—called "Moistrol"—to eliminate excess moisture by evaporation. This innovation is said to do away completely with the "drip tray."

Schaefer, Inc., of Minneapolis, displaying at the Furniture Mart for the first time, revealed its smartly styled line of "Pak-A-Way" home and farm freezers. A new 12-cu. ft. home freezer will be put into production in September, it was stated.

The company has just completed its program of going "100% independent distributors" in the distribution of its home freezer line.

Westinghouse was featuring its two-temperature refrigerator, and the new "single dial" Laundromat automatic washer (described in detail elsewhere in this issue).

Some other new items: Tappan gas ranges, a 66-in. cabinet sink by American Central, and an ironer and two-wringer type washer by Conlon. Scenes of the market are the American Furniture Mart and the Merchandise Mart. The Shows will continue through July 19.

Some exhibitors commented on what they said was a comparatively light attendance during the first few days. The heavy traffic of the winter market opening wasn't duplicated.

However, officials felt this merely indicated an unusually good second week attendance. Manufacturers' representatives were expected to be on hand for the full two week period.

The possibility that current prices of appliances and radios might soon be reduced was discounted by industry executives at a press conference in the Merchandise Mart. The speakers were Howard Scaife, sales development manager of Hotpoint Inc.; Harold Parsons, vice president of Landers, Frary & Clark; and E. P. Toal, sales manager, standard home receivers, General Electric Co.

All three agree that prices cannot be decreased in the foreseeable future because of high labor and materials costs. In fact, Mr. Parsons and Mr. Scaife said they think appliance prices will raise even higher due to the anticipated boost in coal and steel prices. Mr. Toal said he doesn't look for any immediate increase in radio prices.

The speakers mainly blamed unbalanced inventories for failure to achieve full production. They pointed out that although inventories are high, proper kind of steel is still hard to procure.

"We can't always manufacture what we want to, or what the customers want," Mr. Scaife explained. "It depends on the type of steel we get. We are more or less at the mercy of our vendors."

Mr. Parsons said the steel situation probably will not change before early next year. He added that "it looks pretty bad" until then.

One hopeful note was reported by Mr. Scaife. He said that productivity has been on the increase in the last few months due to availability of more experienced help.

Asked to comment on the appliance market and production situation, Mr. Parsons summed up various products as follows:

Vacuum cleaners—no back-up in purchases outside of large population centers.

Ranges—production not up to 1941 volume as a whole. Allocation through first quarter of 1948 expected.

Washers—market for automatic type "pretty well saturated." Wringer-type market, "wide open."

Ironing machines—production is 4-times that of 1941 and market "hasn't even been scratched."

Water heaters—the market has "gone crazy." Production high, no back-up in buying.

Mr. Scaife added that there is an "unbelievable demand" for dishwashers.

In answer to a question on the home freezer market, Mr. Scaife said it was felt that as a whole this market has been highly over-estimated by all manufacturers. He estimated future yearly production at 350,000 to 400,000. He said that outside of certain areas, the big market here would be in two-temp models.

The speakers noted that practically all appliances are still being distributed on an allocation basis, that there is no back-up in these allocations, and that this system will undoubtedly continue well into 1948 on some products.

Westinghouse To Offer Single-Dial 'Laundromat'

MANSFIELD, Ohio—A new, single-dial automatic washer will be introduced nationally by Westinghouse within the next 30 days, it has been reported by I. Frank Brownson, manager of the laundry equipment department of Westinghouse.

The new model "Laundromat" incorporates the control of water temperature and washing time in a single dial. Previously, two dials were used. A single dial eliminates the adjustment of two controls.

Studies by the Westinghouse Home Economics Institute under the direc-

(Concluded on Page 20, Column 3)

'Freon' Offerings Seen as Distilled From 'Bug Bomb'

WASHINGTON, D. C.—There's some pretty good circumstantial evidence being turned up here which would indicate that some of the "Freon-12" refrigerant that is being offered in large quantities at prices many times current suppliers' prices, (as reported in the June 30 issue) has been or would be obtained by re-distilling the refrigerant from War surplus Aerosol "bug bombs."

Here's how the chain of evidence leads to this conclusion:

1. Those who are offering the large amounts of "Freon" at high prices won't divulge their source of supply.

2. Officials of Kinetic Chemicals, Inc., producer of the refrigerant, have issued a formal statement pointing out that they don't ship "Freon" in the size container in which it is being offered, and that, considering that most shipments to customers are being used immediately, it would seem to be impossible to collect the amounts now being offered.

3. One large industrial concern has

(Concluded on Page 29, Column 4)

4 Norge Refrigerator Prices Rise \$10-\$20

DETROIT—Increased material and wage costs have forced Norge division of Borg-Warner Corp. to raise prices on four models of refrigerators. The new prices became effective July 1.

The refrigerator models affected by the company's action are in the lower price range. Increases amount to from \$10 to \$20 on four models. Prices of others were not altered.

Pointing out that the company had taken the step "with great reluctance and only after having postponed an upward adjustment in electric refrigerator prices for several months," Howard E. Blood, president of the division, disclosed that the average retail price increase for the entire line will amount to less than 2½%.

In a prepared statement, he said, "a recent survey of our manufacturing operation indicates that our material costs have risen 63.8% from 1941. Our percentage of increase in wage rates is in excess of that shown for material costs."

Kinetic Will Equip Midwest 'Freon' Plant

WILMINGTON, Del.—Kinetic Chemicals, Inc., is building a plant at East Chicago, Ind., for the manufacture of "Freon" refrigerants which will increase the capacity of its operations by 75%, company officials announced this week.

The buildings are now ready to receive the equipment and this unit is scheduled for operation in the spring of 1948. It is anticipated that there will be an adequate supply of these refrigerants during the busy season of next year, Kinetic officials declared.

Weber Introduces New 'Backroom' Refrigerator

LOS ANGELES—Weber Showcase & Fixture Co. here has introduced new type "back room" refrigerated storage cabinet for use in stores, restaurants, and institutions.

The new product has a number of unusual features, and is fitted with the "roll-a-door" top that marks Weber's commercial refrigerator line. Several of these cabinets have been purchased by the Safeway Stores chain for use in storing perishables in stockrooms.

WANTED District Representatives for the Following Areas

(1) Northern Pennsylvania and New York State. (2) Lower Midwest territory. (3) Southwest. (4) South. (5) West Coast. Applications for salesmen in capacity of District Representatives will be considered for immediate connection if suitable.

Requirements are:

1. Practical or theoretical refrigeration experience.
2. Ability to sell and render service to wholesalers and manufacturers in accordance with a hard-hitting progressive sales program.
3. Character and past record must stand the closest scrutiny. Position offers unexcelled future and excellent remuneration.

Send application and references to

Refrigeration Sales Division
Electric Power Equipment Corp.
412 N. 18th Street
Philadelphia 30, Pa.

WANTED DEPARTMENT SALES MANAGER

Nationally prominent manufacturer of automatic controls for commercial refrigeration, air conditioning, and other major industries, has position available for a specialist to head refrigeration department sales. Must be technically trained and experienced with broad knowledge of commercial refrigeration and air conditioning. Proven record of sales ability essential. Must travel and be willing to live at factory location in middle west. Substantial salary and bonus for the qualified man if he can produce. Send detailed record of educational background and business experience to Box 2418, Air Conditioning and Refrigeration News. Replies will be held in confidence.

REMA Announces Adding Of 6 More Companies to Its Roster of Members

PITTSBURGH—The addition of six new member companies to its roster has been announced by the Refrigeration Equipment Manufacturers Association.

Acceptance of these firms brings the total membership of Rema to 108 companies, according to an association bulletin.

The new members and the products they manufacture are:

Anheuser-Busch, Inc., Refrigerated Cabinet division—mechanical cabinets for the freezing and storing of foods.

Arcade Mfg. division of Rockwell Mfg. Co.—refrigeration hardware.

Frigidaire division of General Motors Corp.—low side and high side equipment; temperature controls; flow control valves; valves, flare fittings, and accessories for low pressure refrigeration; water coolers; low temperature cabinets, cases, and coolers; air conditioners, cases and fixtures.

Jack & Heintz Precision Industries, Inc.—conventional open-type condensing units and hermetic motor compressors.

Sun Oil Co.—petroleum lubricants for refrigerating and air conditioning industry.

Tenney Engineering, Inc.—thermostatic expansion valves; unit coolers; panel units; ice makers; finned coils; air conditioning and heating coils; temperature, humidity, and pressure control chambers.

Conciliation Will Solve More Industry Problems Than Club-Swinging, Farr Says

SAN FRANCISCO—Any attempts at boycotts by refrigeration contractors against manufacturers and wholesalers were scored as "bad practice" by Warren W. Farr, president of the National Association of Refrigeration Contractors, in a talk before the Refrigeration Contractors Association of Northern California here recently.

"When you swing a club, it doesn't always land where it is aimed," he warned. "Sitting around a conference table is a much more effective plan."

Mr. Farr also noted that "there is a tremendous tendency in the industry to overstock, which is resulting in unbalanced inventories."

He foresaw the possibility that some may be forced to dump merchandise rather rapidly and thus upset the price structure.

"Spread it around," he urged. "If dumping goes on by a few, everyone will be affected."

Mr. Farr told the nearly 100 contractors present that the fractional horsepower motor shortage had apparently eased in the East although the West was still behind in its requirements. In contrast, he said, the East is crying for Freon while the Pacific Coast seems to have enough for present demands.

Commenting on the northern California group's petition to the Federal Trade Commission protesting against alleged unfair competition by the dairy industry, Mr. Farr declared that the national association was solidly behind the move.

The petition has already been given a docket number, he asserted, and additional developments are imminent.

"The dairies really want to get out of the business," he opined. "Just a few of them are keeping everybody in. And as soon as the dairies move out, I think the brewers will follow."

Urging a betterment of labor relations, Mr. Farr advised the contractors not to wait until their contracts with the union ran out before they started negotiating.

"As soon as one contract is signed, begin work on the next immediately," he went on. "Get the business agent on your side. Make him the personnel manager of your shop. Let him know

your problems. If he knows in advance what you are up against he'll prevent unreasonable union demands.

Mr. Farr declared that he was amazed at the buying power of the western states and indicated that an industry-wide show for the Pacific Coast was a definite probability in the not-too-distant future.

In describing the recently instituted materials testing laboratory set up by the N.A.R.C., Mr. Farr disclosed that "pilot runs" have already been made on copper tubing and driers and that the materials tested were found to be substandard.

In four samples of copper tubing, the best was found to have four times the allowable amount of foreign ingredients while the worst contained over 10 times the maximum amount.

Some driers tested, he added, actually added water to the system when operated at 20° F.

He explained that the testing laboratories are extensions of the association's program for bettering wholesaler-manufacturer relations. "There is every indication that the wholesalers and manufacturers are willing to cooperate," he noted.

The laboratories, he said, are located at two major universities and will be operated on grants expected to be authorized at the next meeting of the N.A.R.C. directors.

St. Louis Dealer Provides 'Taxi Service' During Transport Strike

ST. LOUIS—When all public surface transportation came to a halt during the recent two week's strike in St. Louis, the appliance department of Biederman's retail furniture company here, solved the problem by offering to send a car for any customer interested in buying any type of appliance.

Company salesmen and store employees provided the "taxi service." Customers needed only to telephone the store at any time from 8:30 a.m. to 8 p.m. and a Biederman salesman would pick them up at a specified time and return them to their homes.

THOUGHTS FOR MERCHANDISERS

**CUSTOMERS
DON'T WHISPER
SQUAWKS!**



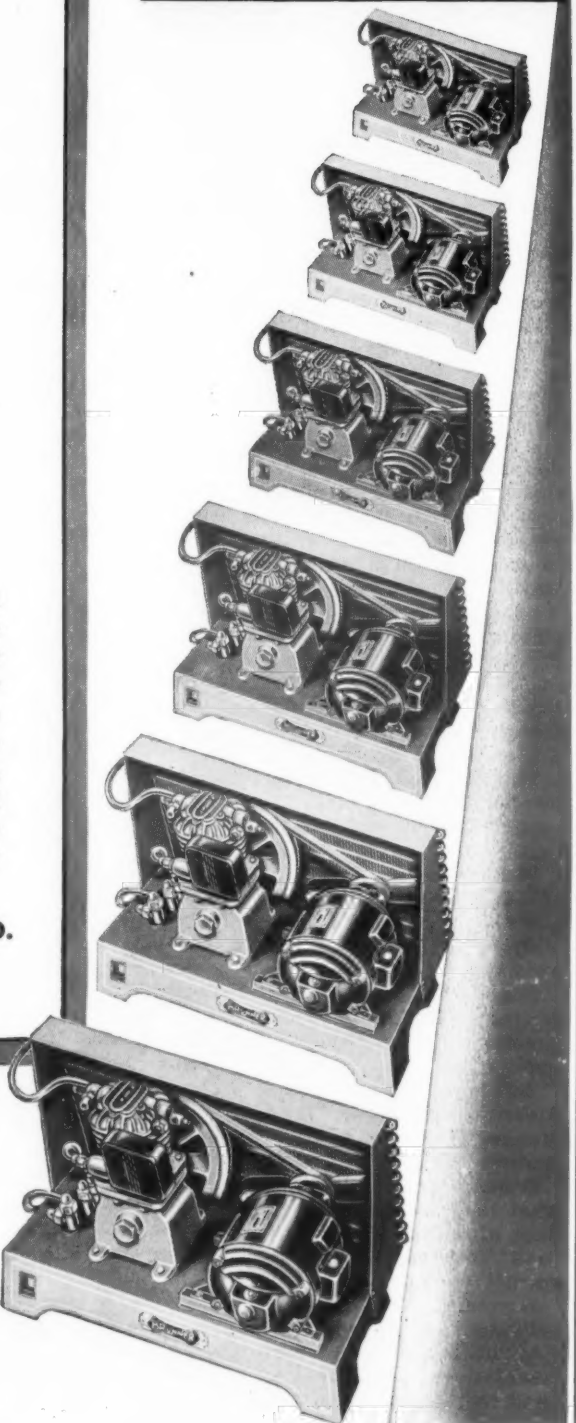
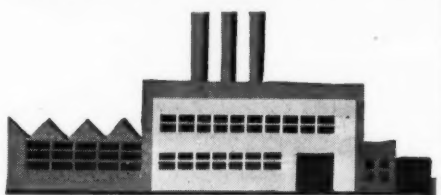
A complaining customer can be very expensive. Bad news travels fast. Good merchandising dictates the need for doing what you can to avoid the loss or displeasure of a single customer. A sound idea for protecting your reputation for quality products is to equip with dependable, long life, low maintenance condensing units. And when it comes to refrigeration condensing units no name is more highly regarded than "BRUNNER." One good customer is worth more to you than the cost of any condensing unit so why settle for anything less than the best?

BRUNNER MANUFACTURING CO.
Utica 1, New York, U. S. A.

AIR AND WATER COOLED MODELS
1/4 HP. TO 25 HP.

BRUNNER
SINCE 1906

BRUNNER SINCE 1906 REFRIGERATION helps you serve better



REFRIGERATION'S BIGGEST PROBLEM!

DRYING POWER OF VARIOUS MATERIALS

Drier	Refrigerant	Liquid or Vapor	Max. Residual Water Concentration After Passage through Drier.	
			25% Initial Water Concentration	50% Initial Water Concentration
ACTIVATED ALUMINA	Sulfur Dioxide	L	.15	.005
	Methyl Chloride	V	.01	.006
SILICA GEL	Sulfur Dioxide	L	.15	.006
	Methyl Chloride	V	.01	.004
DRIERITE (Calcium Sulphate)	Sulfur Dioxide	L	.15	.009
	Methyl Chloride	V	.05	.003
CALCIUM CHLORIDE CaCl ₂	Sulfur Dioxide	L	.09	.013
	Methyl Chloride	V	.10	.005
CALCIUM OXIDE CaO	Sulfur Dioxide	L	.20	—
	Methyl Chloride	V	.15	—
BARIUM OXIDE BaO	Sulfur Dioxide	L	.20	.017
	Methyl Chloride	V	.05	.006

IMPORTANT QUESTIONS IN SELECTING A DRIER

1. Does the material dry the refrigerant below the corrosion limits when placed in the liquid line? In the suction (vapor) line?
2. Does the material dry the refrigerant below the limits for ice formation with methyl chloride and the "Freon" refrigerants?
3. Does the material accomplish the drying in one passage of the refrigerant, or is it slow, i.e., requires several passages?
4. Does the material deteriorate in physical character in handling or when it removes water from the refrigerant?
5. Does the oil affect the drier adversely?
6. Does the drier corrode?

ANSUL REFRIGERANTS ARE AVAILABLE AT LEADING WHOLESALEERS EVERYWHERE

ANSUL CHEMICAL COMPANY
REFRIGERATION DIVISION, MARINETTE, WISCONSIN
DISTRIBUTORS FOR KINETIC'S "FREON-11," "FREON-12," "FREON-21," "FREON-22" AND "FREON-113"



SEND FOR
THIS BULLETIN

An informative reprint, "REFRIGERANT DRIERS," will be sent on request. No obligation. Send for it today.

ANSUL WHOLESALEERS are ready and equipped to render an intelligent, co-operative service to refrigeration engineers and maintenance men on problems which arise from time-to-time in the operation of refrigerating systems.



*REG. U.S. PAT. OFF.



Everything you read . . . everything you hear says, "People are buying *quality* again!"

They're not buying anything and everything as they were last year. They're getting choosy. This year it takes a name with a *proven* background to capture and *hold* their interest.

And to meet this careful shopping, you, as a Kelvinator dealer, already have a head start. Just to have the Kelvinator name behind your products gives you a distinct selling advantage. For when you talk about those features that insure greater user satisfaction, they *ring true* because Kelvinator *means* value and quality to your customer.

With this belief in Kelvinator, customers readily understand and accept your product story. They can "see" the advantage in the trouble-free performance and economy of the Polar-sphere, Kelvinator's great cold-making unit. They can realize the strength in the one-piece steel construction of the cabinet, the extra quality in a liner that has porcelain on *both* sides. They appreciate the Cold-Ban trim around the cabinet opening that makes easier cleaning by hiding unsightly screwheads. Detail



after detail, the story of Kelvinator quality registers *and sticks*.

It is these basic product qualities *and* Kelvinator's retail-minded conception of dealer policies that make your Kelvinator franchise grow more valuable day by day. Together, they offer an unequalled opportunity for dealers to build a sound, successful business future.

You build a future with **RETAIL-MINDED** *Kelvinator*

THE MOST VALUABLE FRANCHISE IN THE APPLIANCE INDUSTRY

DIVISION OF NASH-KELVINATOR CORPORATION • DETROIT 32 • MICHIGAN

End of Regulation W Believed Near As Congress Prepares To Vote on It

WASHINGTON, D. C.—Another legislative step toward ending government controls over credit terms came last week when the Senate Banking & Currency Committee prepared to vote against continuation of Regulation W.

Earlier the House Banking Committee had voted to end these controls.

The measure still requires approval on the floor of both the Senate and House, as well as the signature of President Truman. The latter has indicated that he will approve such action, although he has stated that he is in favor of continued controls to help prevent inflation.

Marriner S. Eccles, chairman of the Federal Reserve Board, also has asked that these controls over installment purchases be continued, but he has declared that unless Congress specifically authorizes their continuation, the controls will be dropped when Congress adjourns.

Senator Buck of Delaware, acting chairman of the Senate committee, stated that he personally favored continuing relaxed credit controls. He believes that the present down payment requirement of one-third could be reduced and the 15-month limit for instalments could be lengthened.

Mead Is Southwest G-E Representative

ATLANTA—Appointment of Howard Mead as General Electric household refrigerator representative in the southeastern district has been announced by J. M. Walker, district manager of appliance sales.

Mr. Mead came with the company in Bridgeport, Conn. in 1940, left for three years' service in the Navy in 1942, and subsequently returned to G-E in refrigeration sales.

Appliance Dealers Hit Jaffe Plan to Drop Price Markup

NEW YORK CITY—Appliance dealers here have branded the recent proposal to drop percentage markups temporarily as "OPA thinking which has been disproven time and again."

To meet what he said was increasing consumer resistance to higher prices, Brig. Gen. E. F. Jaffe, vice president in charge of sales of Consolidated Edison Co., has asked that the appliance industry pass along to the public only the actual price boosts instead of figuring retail prices on the percentage markup basis.

He cited one instance where the list price of a refrigerator had been increased \$40, while the actual increase to the dealer, he claimed, was only \$27.

Dealers here asserted that "no organization whose primary concern is merchandising appliances can get away from percentages employed in all businesses."

Industry Meets To Set Machine Standard--

(Concluded from Page 1, Column 2)

Tecumseh Products Co., the committee chairman, reported that the initial sessions were "successful," and that they marked one of the greatest forward steps in a long program of forming voluntary minimum standards in this fast growing industry.

The Industry Joint Engineering Committee was created on the basis of separate favorable votes by the Refrigeration Equipment Manufacturers Association and the Air Conditioning & Refrigeration Machinery Association. The Rema ballot for the appointment of such a committee was taken in Chicago on April 11 and the ACRMA vote for the same action followed four days later in New York City.

Mr. Smith, as chairman of the joint committee, announced its membership as follows:

Brunner Mfg. Co. (J. W. Thomas, sales manager and Alfred D. Sullivan, chief engineer).

Carrier Corp. (Mark E. Mooney, product manager, applied refrigeration, and Lars Hanson, director of development).

tion, and Lars Hanson, director of development).

Chrysler Corp., Airtemp Division (A. C. Newton, chief engineer).

Copeland Refrigeration Corp. (Oscar H. Buschman, vice president).

General Electric Co., Air Conditioning Department (Frank H. Faust, manager, commercial engineering division, Committee Secretary).

Frigidaire Division, General Motors (J. L. Gibson, manager, commercial engineering).

Lynch Mfg. Corp. (George C. Davis, chief engineer).

Nash-Kelvinator Corp., Kelvinator Division (George R. Kingston, commercial sales department).

Servel, Inc., Electric Refrigeration Division (Clyde Ploeger, chief engineer).

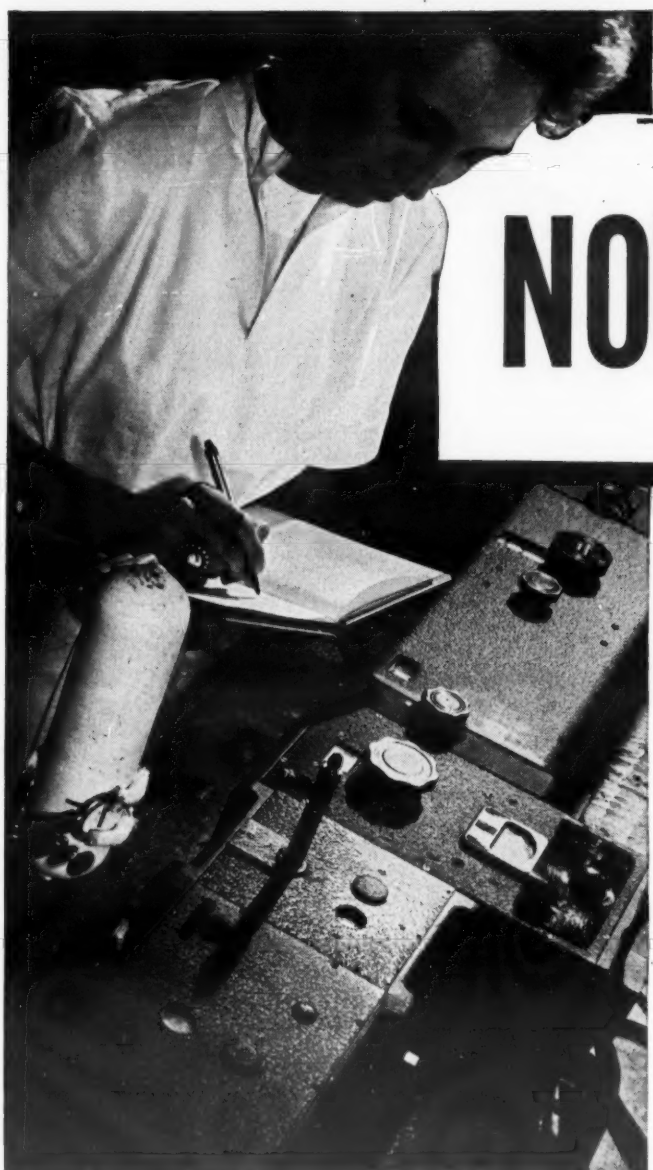
Standards Engineering, Washington, D. C. (Leonard C. Bastion, Recording Secretary of the Committee), Universal Cooler Corp. (William W. Higham, chief engineer).

York Corp. (Walter E. Landmesser, resale sales division, Committee Vice Chairman, and Henri A. Brysselbout, chief commercial application engineer).

Liquid Carbonic Names Tull

CHICAGO—Appointment of Henry M. Tull as southeast regional manager for Liquid Carbonic Corp. has been announced by Wayne D. Jordan, vice president.

Mr. Tull, who has been with Liquid Carbonic Corp. since 1941, will cover an area including Florida, Georgia, Alabama, North and South Carolina, and eastern Tennessee.



NOW—

"Freon" Moisture Content Less Than 10 Parts Per Million

Sensational dryness of "Freon" Refrigerants provides greater protection for low-temperature refrigerators

To meet the need for proper frozen food storage in lockers and household refrigerators, "Freon" safe refrigerants are now produced virtually anhydrous . . . practically eliminating the possibility of freezing in evaporators and expansion valves!

After extensive research, Kinetic chemists, physicists, and engineers designed and installed new equipment in the "Freon" plant . . . equipment that now produces "Freon" with a moisture content of less than 10 parts per million!

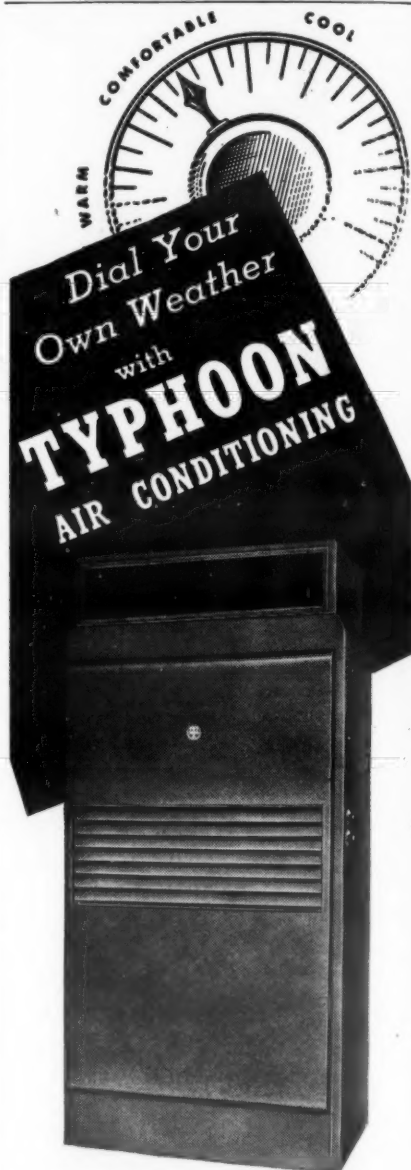
This means that there are less than two teaspoonfuls of water in a ton drum of "Freon" . . . half a gram in a 145-lb. cylinder!

This sensational dryness, in addition to the purity and quality of every ounce of "Freon," has made possible and practical new and better low-temperature equipment for freezing and storing quick frozen foods. It is another reason why these safe refrigerants are ideal for all types of commercial, industrial and household applications. Kinetic Chemicals, Inc., Tenth and Market Streets, Wilmington 98, Delaware.

For production control and to test shipments of "Freon" to customers, a new method of testing for infinitesimal amounts of moisture was necessary. This was provided by a spectrophotometer . . . an instrument in which a beam of infrared "light" is passed through a sample of "Freon." The infrared rays are absorbed by water . . . not by "Freon" . . . so by measuring the amount of absorption it is possible to determine how much water is present to an accuracy of one part per million.

OUTSTANDING FEATURES OF "FREON" SAFE REFRIGERANTS

1. Freedom from moisture . . . now less than 10 parts per million.
2. Narrow boiling point range—confined within limits of $\frac{1}{2}^{\circ}\text{C}$.
3. Less than 2% of air in vapor phase.
4. Freedom from acids. There are none in "Freon".
5. Freedom from high and low boiling products.
6. Non-toxic . . . non-flammable . . . non-explosive.



PROP-R-TEMP
SELF-CONTAINED UNITS
3-Ton, 5-Ton, 7-Ton
PAY OFF WHEN THE GOING IS TOUGH

These rugged, oversized units are built to give service under the most trying conditions. When the water supply is less than normal, the oversized condenser will still keep head pressures within bounds and the machine will keep plugging along, turning in a beautiful job of air conditioning.

The big cooling coil and every other oversized part gives assurance that this TYPHOON unit, year after year, will deliver 12,000 BTU of actual air conditioning performance for every ton of rating.

This means a maximum of satisfaction for your customers and the very minimum of service headaches for you.



Write for further information and inquire if your dealer territory is still open.

Dept. 218
TYPHOON AIR CONDITIONING CO., INC.
Division of Ice Air Conditioning Co., Inc.
794 Union Street Brooklyn 15, N.Y.

Added All-Industry Show Plans Revealed; Banquet Will Once Again Be a Feature

PITTSBURGH—"The biggest date in '48"—original slogan for the entire Fifth All-Industry Refrigeration and Air Conditioning Exposition in Cleveland next January—will have special meaning on the single day of Jan. 27, 1948, for the nation's refrigeration contractors and service engineers.

On that date, the show will open exclusively to these two groups in the refrigeration industry, and plans already are under way by the National Association of Refrigeration Contractors and the Refrigeration Service Engineers Society to take full advantage of the opportunity thus provided to view the industry's new products in special displays provided by the manufacturers.

Word received at headquarters of the Refrigeration Equipment Manufacturers Association, sole sponsor of the 1948 show, indicates that both NARC and RSES will have special events in connection with the exposition. During the week preceding the show, the service engineers will hold their 10th annual convention, and it is understood that contractors, who have national headquarters in Cleve-

land, also will participate actively in the show program.

Another feature, announced by F. J. Hood, chairman, is an all-industry show banquet to be held in the Cleveland auditorium on one of the four evenings of the exposition—Jan. 26 to 29.

Official show hours, when the event will be open to the entire industry and trade, are 2 to 10 p.m. Monday; noon to 6 p.m. Wednesday, and 10 a.m. to 4 p.m. Thursday.

As of July 1, 1947, the number of exhibitors increased to 139, and the number of exhibit spaces to 195.

'Black Market' In Electric Motors and Other Scarce Industrial Supplies Said To Be Vanishing Rapidly

NEW YORK CITY—Return of the buyer's market and fading of "black markets" are seen as a result of improvement of shipping dates of durable goods, notably electric motors, according to purchasing executives here. The "black market" in electric motors is reported to be almost eliminated.

Five additional indications of an improved market listed by the purchasing executives are:

(1) Notification of buyers of brass mill products that rebates were being sent for excessive prices paid on brass products between May 26 and June 11; (2) virtual complete elimination of the "black market" prices on electric motors; (3) simplification of lines

to eliminate costly obsolete products by valve manufacturers; (4) improvement in offers of steel mills to book orders for heavy steel plates, and (5) indications of improvements in freight transportation.

Some factories, according to reports, are making deliveries on fractional horsepower motors in 30 days of receipt of order. Deliveries of two to five horsepower motors are also said to be on a thirty-day basis in some cases, but larger motors are quoted at delivery next March.

Two letters have been received by one purchasing executive offering his company a rebate on "excessive charges" for brass goods bought between May 26 and June 11.

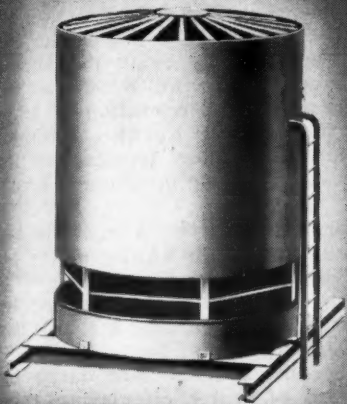
Milk Container Law To Help Cooler Sales

BUFFALO—A lucrative field for the sale of refrigeration equipment is seen as a result of the new state law requiring dispensing of milk in eating places in half-pint containers, either bottle or paper.

This law prohibits the use of siphon dispensers or lading milk from a large container or can. The law is aimed at protecting the public for sanitary reasons and also to guarantee that the public gets whole milk.

This switch is expected to take some time until necessary refrigeration equipment is acquired by dealers to handle the milk in containers.

ONLY COEY COOLING TOWERS BRING YOU THE HIGH EFFICIENCY OF



FLOATING FILM

Roger's "COEY" Floating Film Cooling Towers apply a cooling principle widely endorsed by engineers and contractors; bring you high efficiency in cooling tower units:

HIGH CAPACITY — LOW WEIGHT
SILENT OPERATION
CONSERVES WATER
LITTLE SPRAY LOSS
ALL-METAL FIREPROOF CONSTRUCTION
EASY TO MAINTAIN
(No spray nozzles to clog; no baffles to replace)

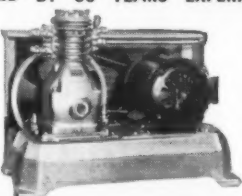
Available in wide range of sizes. Models 20-R and 50-R (capacity range 30 to 175 tons) available for immediate shipment.

For full information including technical description, ratings, list of prominent users, write for Bulletin CT-A.

A PRODUCT OF
R. B. ROGERS COMPANIES, INC.
1120 Leggett Avenue
New York 59, N. Y.
Exclusive Manufacturers of
the Rogers T-Glycol System
of Chemical Dehumidification

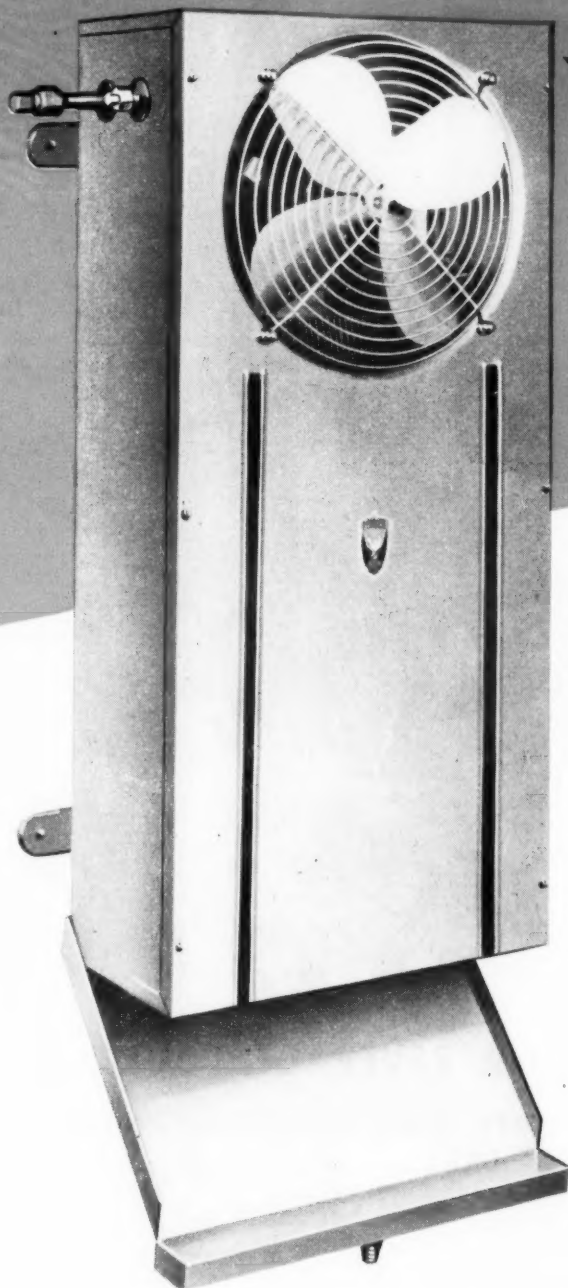
* Such as
CHRYSLER BUILDING, N. Y.
NEW ENGLAND CONFECTIONERY CO.

ALL STAR PERFORMANCE
BACKED BY 30 YEARS EXPERIENCE



DEPENDABLE SERVICE
RUGGED CONSTRUCTION
ECONOMICAL OPERATION
GENERAL REFRIGERATION DIVISION
Votco-American Machine Co., Beloit, Wis.

Lipman
AUTOMATIC REFRIGERATION



GUN COOLERS

First as usual, Peerless conceived, created and now further improves the Gun Cooler line! Here is refrigeration as easy to install as hanging a clock. All engineering is done at the factory! Revolutionary, proved successful in thousands of installations, it reverses operation of conventional blower-type units, performs in upside-down fashion! Warm air is drawn into the grill at top of cooler, pours gently out the bottom chilled to the proper degree, absorbs heat from the stored products and rises to be re-chilled by the Gun Cooler. A sound, effective cooling cycle!

Peerless
**ANNOUNCES
NEW MODELS!**

The Famous **PEERLESS GUN COOLERS**
and Large **UNIT COOLERS** with Flash
Tube Fin Coils!

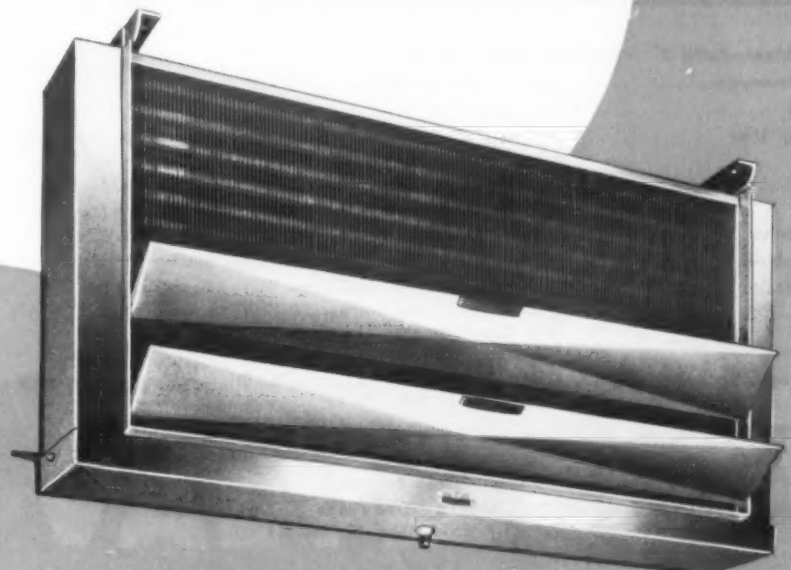
Literally champions! In smart styling, advanced design, and because they have an air-tight record for superior cooling at minimum operating cost. Peerless Unit Coolers never let

their users down! Now more than ever, these coolers substantiate their reputation for "More Refrigeration per Dollar." New models, new improvements, everything which contributes to utter satisfaction is included in their make-up—beauty, compactness, unfailing mechanical performance! Attractive casings are heavy gauge, highly polished aluminum. In these units the basic Peerless policy stands out clearly—to produce low cost equipment by engineering developments, not by cutting corners! No sacrifice has been made in construction, materials or workmanship—nothing spared to make Peerless Unit Coolers the champions of their class.

For superior performance specify all these PEERLESS products: Flash Plates, Flash Coolers, Unit Coolers, Ice Cube Makers, Fin Coils, Off Center Coils, Expansion Valves and Capacity Boosters. Write for details.

LARGE CAPACITY UNIT COOLERS

Designed especially for installations requiring large refrigeration capacity in a minimum of space, these models are made long and narrow. They fit closely to the refrigerator ceiling, save storage space and reduce possibility of air being blown directly on the stored product. A typical Peerless product in attractive styling and painstaking workmanship.



SOLD THROUGH LEADING REFRIGERATION SUPPLY WHOLESALERS

PEERLESS of AMERICA, Inc.
General Sales Offices 2901 Lawrence Ave. • Chicago 25, Illinois, U. S. A.

**PRICES
CUT 15%
TO DISTRIBUTORS
TO DEALERS**

RETAIL PRICE NOW ONLY \$385 f.o.b. factory



The cost per cubic foot of usable refrigeration space in this size range is probably the lowest in the history of commercial refrigeration.

NEW

**saves
SPACE
FOOD
PROFITS
ONLY COOLER
OPERATED EITHER
WET OR DRY!**

Artkraft BEV-FOOD

COMBINATION FOOD AND BEVERAGE COOLER

THE ONLY COMBINATION COOLER THAT CAN BE OPERATED
WET OR DRY

Can be used entirely for dry refrigeration from bottom to top of each compartment. Top opening of wet or dry compartment prevents spill-out of cold.

A self-contained "plug-in" unit engineered for outstanding performance.

**SUCCESSFULLY PRESERVES—
WITHOUT INTERMINGLING OF FOOD ODORS:**

Hamburger—at normal temperatures for 30 days.
Sweetbreads—ten days without spoilage.
Steaks and chops—almost indefinitely.
Fish—better than ice.
Fowl—almost indefinitely.
Cream pies—for a week or more.

Sealed Cabinet—Solid 3" insulation—Vermine-proof.
Cabinet Dimensions 65 3/8" x 38" x 29 1/2".....
Refrigerant F12 Freon.
Condensing Unit Quarter Horse-Power, Twin Cylinder Air Cooled. Equipped with Tecumseh or Universal Unit.
Motor Quarter Horse-Power, 60 Cycle, Single Phase, 1750 R.P.M., 110 Volts, Capacitator Type.
Exterior Finish Silver Blue.
Top of Cabinet Stainless Steel with 2 Stainless Steel Sliding Covers.
Bottle Capacities Top Compartment—Standing: 104 12 oz. bottles, Lying: 192 12 oz. bottles.
Side Compartment—Standing on Shelf: 49.
Standing Below Shelf: 64, or lying down: 150 12 oz.
Food Storage Dimensions Slightly more than 7 1/2 cu. ft. (plus 6 1/2 cu. ft. in top compartment, total 14 cu. ft.).
Food Compartment Dimensions..... 21 1/4" wide; 28 3/4" high; 20 1/4" deep.
Lighting Automatic Light in Food Compartment.
Finish (Interior) White Porcelain Enamel.
Top Compartment Dimensions..... 35 3/4" high x 20 3/4" wide x 15 1/2" deep. (Slightly larger than 6 1/2 cu. ft.)
Cold Control 8 point.

The Artkraft Manufacturing Corp.

Quality Products for a Quarter of a Century
200 KIBBY ST., LIMA, OHIO, U.S.A.

THE IDEAL UNIT FOR

RESTAURANTS
ROADSIDE STANDS
DAIRY STORES
RECREATION
CENTERS
HOTELS

TAVERNS
FISH MARKETS
FACTORY
CAFETERIAS
HOSPITALS
SODA FOUNTAINS

BEVERAGE BOTTLERS
BOWLING ALLEYS
MEAT MARKETS
DELICATESSENS
CANDY STORES
DRUG STORES

DEALERS:

ASK YOUR DISTRIBUTOR FOR THIS GREAT PROFIT-MAKER—OR
WRITE US FOR HIS NAME. DISTRIBUTED IN MANY AREAS BY
G.E. SUPPLY CORP.

DISTRIBUTORS:

WRITE FOR DETAILS OF FRANCHISE FOR OPEN TERRITORY

THIS COUPON FOR YOUR CONVENIENCE

THE ARTKRAFT MANUFACTURING CORPORATION
200 KIBBY ST., LIMA, OHIO, U.S.A.

- ☐ Please send more details on BEV-FOOD.
☐ Please send the name of the BEV-FOOD distributor in this territory.
☐ Please send details of distributors' franchise.

NAME.....
FIRM.....
CITY.....

Vet Appliance, Frozen Food Shops Fail In Some Areas

NEW YORK CITY—Ex G.I.'s who have gone into the appliance business in Los Angeles or have opened frozen food shops in Boston are rated high in the list of veteran business failures, a survey recently conducted by the *Wall St. Journal* revealed.

A Los Angeles bank loan official explained the situation there this way: "Veterans were lured into the appliance store business by wartime talk of electrified dream houses. There got to be too many of them, so the marginal operators have been dropping out."

However, veterans borrowing money under the G.I. loan to start new businesses have, in general, been good risks, bank officials reported. Veterans who tried to break into the trucking business have accounted for a large share of the defaults so far, the survey said.

Army Shoots the Breeze-- In Tanks, Mess Halls

YUMA, Arizona—If the Army has anything to say about it, the tank driver of the future won't be apt to get very hot under the collar. He'll be riding around in an air conditioned tank.

The same goes for the mess sergeant. He'll be outfitted with an air conditioned mess hall.

These are merely two of the innovations currently being put through their paces a few miles north of here. Technically, the operation is known as "Task Force Furnace." Object: to find out how tropical military materiel will hold up under a broiling sun.

According to the Army, the sweltering tankman is a thing of the past. In his place is the happy soldier whose furrowed brow is cooled by a current of air passing through damp excelsior.

The excelsior is kept damp by a stream of water circulating through the container. The air, in turn, is kept moving by a fan attached to the engine. The soldier, in turn, is kept happy.

Those mess halls, by the way, are air conditioned by mobile, diesel units.

Distributor Names Brody Appliance Div. Sales Head

PITTSBURGH — Kenneth Brody has been appointed sales manager of the appliance division of J. A. Williams Co., distributor here, according to Leroy Williams, president of the company.

For the past 10 years Mr. Brody has been technical director of the appliance test rooms of *McCall's* magazine. He is a member of several societies among which is the American Society of Refrigerating Engineers.



Kenneth Brody
American Society of Refrigerating Engineers.

Breakfast of Future Has Frozen Orange Juice, Coffee Concentrates

BERKELEY, Calif.—You may soon see the drug store clerk make your morning orange juice and coffee by merely pouring some water into frozen concentrates. And you may soon be able to get frozen orange concentrate from a vending machine.

The Refrigeration Research Foundation reports that the Florida Citrus Commission has been working with a Chicago firm on tests relating to the marketing of frozen orange concentrate through dispensers.

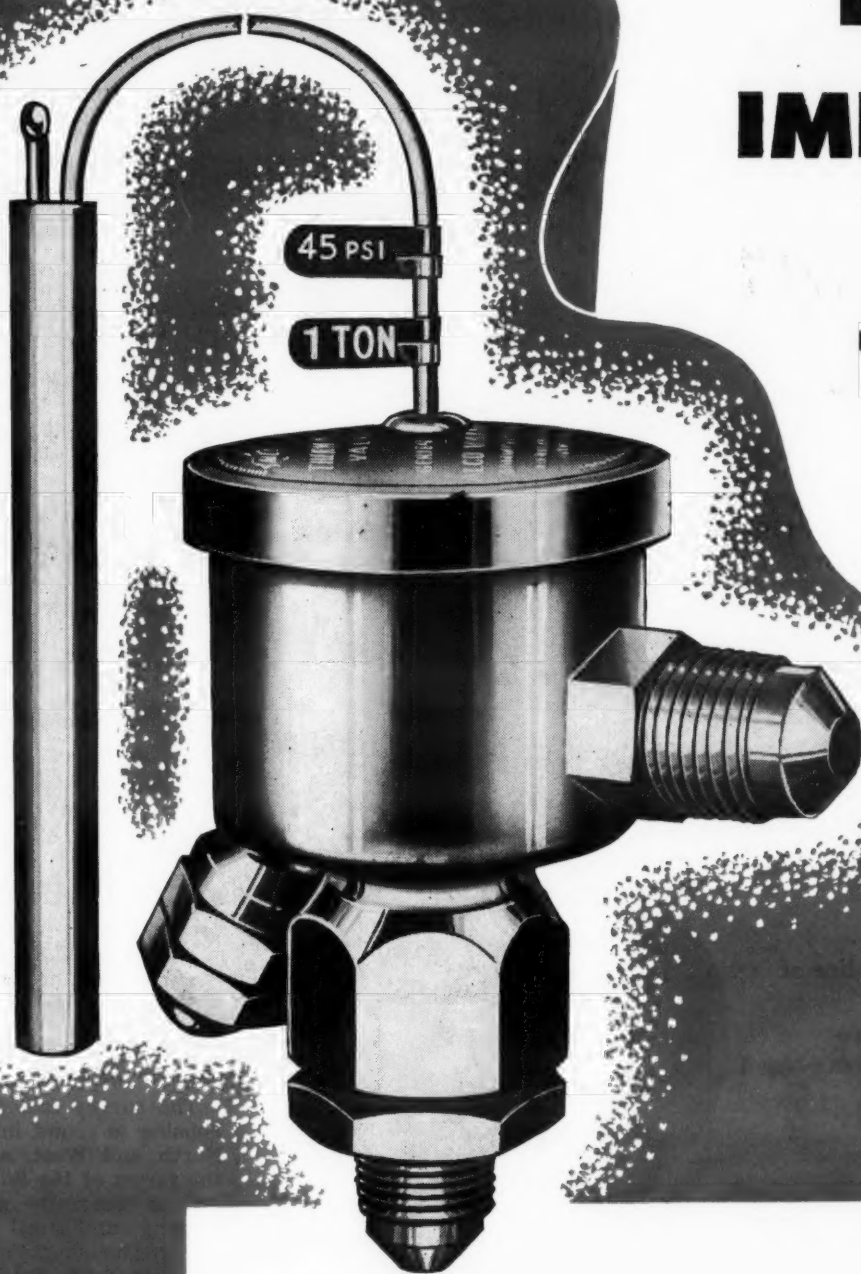
"If successful," the Foundation says, "the new method would increase the demand for orange concentrate. If efforts to concentrate coffee by freezing and removal of part of the water as ice also succeeds, we may see the day when drug store coffee as well as orange juice—and probably other beverages—will be made simply by mixing water and frozen concentrate."

ALCO THERMO-LIMIT VALVE

**LAST YEAR'S
IMPROVEMENT**



**THIS YEAR'S
STANDARD**



The THERMO-LIMIT has now proved its worth in tens of thousands of refrigeration systems. It combines all the advantages of liquid- and gas-charged valves:

- **PRESSURE LIMITING.** Prevents motor overload.
- **INTERCHANGEABLE PRESSURE LIMIT.** Various pressure "cartridges" can be easily replaced in the field.
- **LIQUID-CHARGED.** Positive control — can be installed in ANY location or position.
- **INTERCHANGEABLE CAPACITY.** Various cage assemblies can be easily exchanged in the field.
- **EXTERNAL ADJUSTMENT.** Change of super-heat does not affect pressure limiting point.

Available at Alco wholesalers everywhere. Write for our Bulletin 152.



Designers and Manufacturers
of Thermostatic Expansion
Valves; Pressure Regulating
Valves; Solenoid Valves;
Float Valves; Float Switches.

ALCO VALVE CO.

853 KINGSLAND AVE. • ST. LOUIS 5, MO.

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PRODUCTS COMPANY

PLYMOUTH • MICHIGAN

Makers of
REFRIGERATOR SHELVES • STAMPINGS
FORMED AND WELDED PRODUCTS

We have open capacity
for 50 ton and 100 ton
press work.

Why not write us about
your stamping problems?

INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)
roughly \$85 to \$87 billion, according
to one section of the Twentieth
Century Fund's voluminous new survey,
America's Needs and Resources.

This would represent an average
expenditure of \$5.7 or \$5.8 billion
annually on the part of the entire
nation—to build nearly 19.7 million
new houses, and to rehabilitate 5.4
million units—at the rate of 1.3 mil-
lion new houses and 363 thousand
repaired homes a year.

However, it is probable that actual
demand will equal no more than 84
to 86% of this estimated need, or
around \$72 billion dollars for both
new and rehabilitated houses—at an
annual expenditure of \$4.1 billion for
16 million new houses.

Here's the joker: Costs are figured
in terms of 1940 prices, so it's ob-
vious that these figures are ultra-
conservative in terms of present
prices.

These capital estimates were based
on a careful study of housebuilding
trends in the past. Historical trends
indicate that, in a high-employment
economy, housing production should
constitute about 3.6% of our total
production of goods and services.

In attempting to justify these esti-
mates, Evans Clark, executive direc-
tor of the Twentieth Century Fund,
writes: "It is important to determine
what would be required to bring our
housing up to minimum standards so
that every American family could
live in decency and comfort. How-
ever, it would be unrealistic not to
estimate what the demand will be,
as well as the need. Then we can
see whether or not the gap between
the two can be filled.

"The report indicates that we can
count on a demand equal to approxi-
mately 85% of our need, based on
the assumption that we will have
high-level employment and a high
national income. If that is so, nor-
mal market operations will be able
to supply the bulk of our housing
requirements.

"The importance of capital outlays
for housing can hardly be exagger-
ated," Mr. Clark continued. "Upon
their size depends the quantity and
quality of our houses. Moreover, they
constitute in normal times one fifth
of all capital expenditures. This
means that housing is one of the
major outlets for investment and,
therefore, vitally important for main-
taining high employment and produc-
tion."

According to the Twentieth Cen-
tury Fund's report, the present condi-
tion of our housing is far from
satisfactory by any adequate stand-
ards. Of the 37 million dwelling units
in 1940, it is estimated that only 21
million were in good condition; the
remaining 16 million needed to be
either replaced or rehabilitated. Al-
most a fifth needed major repairs;
about a third had no running water;
40% had no private flush toilet or
privy; and about 45% had no private
bath or shower.

The survey indicates that the best
housing is found in the cities of the
North and West, and the worst on
the farms of the South. Urban hous-
ing is generally superior to rural
housing, and rural nonfarm housing
to farm housing. Four times as many
southern farm dwellings need major
repairs as do western urban dwell-
ings; and overcrowding is five times
as frequent in the South as in the
North. But the northern cities
shouldn't brag. Almost 13% of the
urban dwelling units in the North
and West lacked a private flush toilet
in 1940.

What an opportunity for specialty
selling!

This challenging report indicates
that 35% of all urban housing was
substandard in 1940. This conclusion
is based upon the assumption that
in blocks where more than half the
dwellings need toilet facilities or
major repairs, the whole block is
actually substandard. Deterioration
always spreads like a plague from
one house to another. If half the
houses in a block are run down and
dilapidated, the rest will inevitably
be affected.

Some of the dwellings in the sub-
standard group can be rehabilitated.

Rural homes are in far worse con-
dition than those in the cities. While
one third of urban dwellings are in
poor shape, one half of our country's
housing needs major repairs, lacks
running water, etc. Two thirds of all
farm units fall into the substandard
category.

There are very few houses in the
United States that cannot be rehabili-
tated; but when the reconditioning
has to be so extensive and the cost
so high as to make it tantamount to
new housing, then rehabilitation is a
misnomer.

When a whole block or a whole
neighborhood is substandard, replace-
ment is more advisable in the long
run than is a piecemeal attack.

Our long history of failure to
spend enough on our housing to off-
set depreciation has left us with a
heritage of millions of dwellings that
have deteriorated so far that they
can no longer be restored but must
be replaced by new structures.

In addition to replacement of sub-
standard housing, we need new
houses for new families. If a vacancy
rate of 3% is assumed for 1960, the
44.3 million families existing in 1960
will require roughly 45.7 million
dwelling units. That represents a
net increase of 8.4 million over the
number of houses in 1940. Since
over 2 million permanent dwellings
were added between 1940 and 1945,
some 6.3 million extra home units
will be needed by 1960 to house
additional families.

To the requirements for housing
new families, we should add houses
to permit families that are now
doubled up to live alone. If half the
families now living together were to
move into separate quarters, we
would need at least 850,000 additional
new homes.

The nation also will need one mil-
lion new nonfarm dwellings to take
care of the farm families that are
expected to leave the countryside in
coming years. In addition, we shall
need 1.4 million dwellings to replace
houses demolished by acts of nature
during the 15-year period. Adding
these figures to the 6.3 million houses
for new families and the 10.1 million
for replacement of substandard units,
a total of nearly 19.7 million new
dwellings are in the picture.

The total cost for such a program
might come to at least 100 billions of
dollars—and probably much more, if
current high costs continue to pre-
vail. And that's an awful lot of
money!

Also, it's quite a market!

WILSON
SELF-CONTAINED
AUTOMATIC
HIGH WATER LEVEL
ZERO-FLOW

STOPS MILK SPOILAGE

COOLS
THE DANGER ZONE
FAST

Wilson ZERO-FLOW
MODEL ZFB HX50

Packaged-Unit Milk Cooler
Sizes from 4- to 24-can capacity

TO CAPTURE THE FARM MARKET
AND HOLD

Specify Genuine "Refrigeration by Wilson"

• FARM MILK COOLERS • FARM FREEZERS • FARM REACH-IN REFRIGERATORS • FARM WALK-IN REFRIGERATORS

For Franchise Information, Address Dept. II **WILSON REFRIGERATION, INC.,** Smyrna, Delaware



AMCOIL

ALL THE WAY!

SENSAIRE • LATENAIRE
ONE LINE OF AIR CONDITIONERS
FOR EVERY APPLICATION

**DEALERS
DISTRIBUTORS
WHOLESALE
AMCOIL means
profits for
you!**

Cash in on the Amcoil Sensaire and the
Amcoil Latenaire Conditioners—the complete line of
air-conditioners. Fast Moving—Nationally
Advertised—Remote and Self-contained Types—
Immediate Deliveries—PROFITS FOR YOU! Act Now!

AMCOIL LATENAIRE CONDITIONER

The answer to human comfort in warm hu-
mid climates—thrives on humidity! Patented
revolutionary operating principle literally
wrings moisture out of the air! Provides cool,
healthfully conditioned air without that
clammy ice-box feeling. Adjusts automati-
cally to varying temperature and humidity
conditions. Fully equipped, remote and self-
contained models. Attractive streamlined
cabinets make a handsome addition to any
room.

AMCOIL SENSAIRE CONDITIONER

The answer to human comfort in warm dry climates. Specifically
designed for comfortable air-conditioning wherever sensible heat loads
predominate. Efficient, quiet operation; in both remote and
self-contained types. Fully equipped. Beautifully streamlined cabinets,
finished in attractive two-tone brown, crackle baked enamel.



Amcoil Extended Surface
Fin Increases Capacities.
Pat. No. 2,402,262.



DISTRICT OFFICES:

Philadelphia: 250 North 15th Street, Rittenhouse 6-9563
Chicago: 215 W. Ontario Street, Superior 4859

JUST OFF THE PRESS

Send for your copy of the new AMCOIL Air-conditioning catalog.
Attractively printed in color, it describes and illustrates the complete
line. Also included are complete engineering and selection tables
along with a handy, new heat load calculator chart. Write today!

MANUFACTURER'S REPRESENTATIVES
A. J. Nelson Co., 1635 Blake St., P.O. Box 2244, Denver Colo. • William D. Keefe, Chaffee, New York • J. York Feitel, 813 Howard Ave., New Orleans, La.
Robbins-Greenwood Co., 3104 Main St., Houston 4, Texas • J. E. Oliphant & Co., 505 Uhler Bldg., Marion, Ohio • Wm. G. McGuire, 691 Yorkshire Rd., N.E.,
Atlanta, Ga. • Russell Sales Co., 1421 S. Broadway, Los Angeles 15; 666 Mission St., San Francisco 5, Cal.; 1553 N. 37 St., Seattle 3, Washington

SALESMEN!

IF YOU CONTACT Food and Meat Markets, or Pet Shops,
here is an excellent opportunity for you to add substan-
tially to your present income.

A READY MARKET AWAITS YOU

when you sell

**Polar Pet Food
Cabinets**

**And THERE IS NO
COMPETITION!**

Recent Tests Prove Every Other
Call a Sale!

Polar Pet Food Cabinets are
nationally advertised in Food
Publications.



Pat.
Pending

WRITE US FOR FULL PARTICULARS

REFRIGERATION ENGINEERING CO.

211-215 Foshay Tower

Minneapolis 2, Minn.

Value Leaders... in low range power



Redmond

TYPE "L"

MICROMOTORS

LOOKING for value? Well, you'll find plenty of it in these Type "L" low range Micromotors—from their economical first cost, straight through their long useful years.

Here value is measured in keen engineering. It's perpetuated in skillful manufacturing . . . and proven in millions of world-famous products.

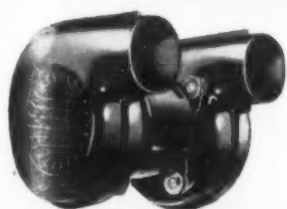
You're reading about the Value Leaders of the entire electric motor

industry. These Redmond Micromotors represent a sound investment, for now and for good. They're uniformly precision built and individually checked. They run quietly and smoothly, and have earned an enviable reputation for dependability.

Learn the complete story of these Value Leaders. Get in touch with Redmond now. Ask about the Type "L" Micromotors, built in sizes from 1/150th up to 1/40th horsepower.

Redmond production capacity has been increased . . . prompt deliveries can now be offered.

LONG-LIFE Blowers



Sturdily built, carefully balanced Redmond Blowers are built in double units for delivery of 100 cubic feet per minute (free air), and in single units that turn out 50 cubic feet. Both are powered with resiliently mounted long-life Redmond Type "L" Micromotors.



Redmond COMPANY, Inc.
MAIN OFFICES: OWOSSO, MICHIGAN, U.S.A.



Composite view of Redmond Plants

REDMOND FACILITIES INCLUDE 2500 EMPLOYEES AND MORE THAN 5 ACRES FLOOR AREA

Headquarters

REFRIGERATOR HARDWARE
for domestic, commercial and
low temperature cabinets



**Whiting - the new great name
in food freezers...so soundly
engineered...so mechanically
perfect that one of America's
leading insurance companies now
underwrites this amazing policy.**



MODEL F-2000—Spacious 12 cu. ft. capacity of approximately 385 lbs. Powered by a 1/4 hp. removable "Packaged Power" sealed unit. Heavily insulated with 4" Fiberglass. Thermostatically controlled to maintain zero temperature.

MODEL F-1000—Convenient 4 1/4 cu. ft. capacity of approximately 165 lbs. Powered by a 1/4 hp. sealed "Packaged Power" removable unit. Insulated with 4" Fiberglass. Thermostatic control maintains constant zero temperature. Extra large condenser surface eliminates fan or additional cooling devices.

Here is dramatic proof of the superiority of the Whiting Food Freezer. Every Whiting Food Freezer owner, at his option, can secure an insurance policy that protects against food spoilage from any and all mechanical failures of the Whiting Food Freezer. Coverage is up to \$150.

The incredibly low cost of this policy is five dollars and that covers the entire three years of the policy! The exclusive Whiting insurance policy is another reason why Whiting dealers enjoy more sales... more profits... more satisfied customers.

WHITING

the new GREAT NAME in Food Freezers

FIRST NATIONAL BANK BUILDING, CHICAGO 3, ILLINOIS

What Happens When the Power Fails?

Home Freezer Owner Learns Facts After Leaving Unit 102 Hours Without Current

SAN DIEGO, Calif. — When J. Clark Chamberlain, secretary-manager of the Bureau of Radio & Electrical Appliances here, finished his home-freezer talks given during Bureau-sponsored, home-planning classes, someone nearly always asked: "What about the danger to food when the power goes off?"

Since he had never had occasion to make any tests himself, Mr. Chamberlain was forced to quote the experts.

But thanks to a "fool arrangement" whereby the switch which lights his garage also served his home freezer, he can now answer such queries with authority. This is Mr. Chamberlain's story of how he got to be an "expert."

"To begin with," he told the NEWS, "as an ardent home freezer user (we have a Kelvinator) I have consistently used my own illustration before group meetings of the public as one wherein a family of two, living on a city lot without producing one thing from the land, could make a home freezer pay for itself.

"It has been my job to cover this subject in all of the Home Planners Institute classes we have conducted for the past three years (during the early part of which program I did not possess a home freezer) and in many other meetings where the public gathered.

"Almost without exception, during the question period which followed the 50-odd lectures on home freezers which I have given, some person would ask about the danger from loss of food should the power be cut off or the unit fail. Clearly, this fear seems to come naturally to the minds of many prospects.

"Always I would cite the opinions and experiments of the best-recognized authorities to show how long a good freezer would protect its load, but obviously it was all theory. Now I am an expert, for everything in the book and more has happened to me as follows:

'A Fool Arrangement'

"Our home freezer is in the garage because of no space in the house. The control switch which lights the garage also serves the freezer, so care must be taken in entering the garage at night to see that the freezer is not cut off (a fool arrangement, of course, which was to have been corrected long ago).

"We have trained ourselves to remember this situation and always have, up until one night a couple of weeks ago when I went to the garage to get our bags for a trip out of town for several days. This time I forgot, and flipped the switch cutting off the current, as we departed!

"Slightly more than 100 hours later, we returned to discover what had happened. It was a sickening sensation to see the packages on top completely defrosted, with ice cream turned to milk.

"But I bravely turned the switch back on and commenced to clean out the freezer preparatory to throwing things away. It did seem cold though, and temperature was checked. It was around 50° on top and obviously much colder lower down. We remembered what the authorities had said about such cases, to the effect that if ice crystals remained, perhaps re-freezing could be accomplished.

Much Remained Frozen

"Anyway, to cut across an agonizing half hour or so, we got everything out and to our amazement found many things obviously still frozen partly at least. We cleaned

up the mess from melted ice cream, berry juice, etc., and decided we had nothing to lose by just leaving everything in the freezer to see what would happen. Fortunately, my wife is highly skilled at packaging and sealing and we knew we had every advantage in this respect.

Temperature Back to Zero

"Finally, after goodness knows how many hours of constant running, temperatures were back down to zero, and then we commenced to really see what had happened to all of that stuff after just short of 102 hours without current.

"We had a great many steaks, roasts, chops, two large turkeys, half a dozen packages of disjointed chicken, several half lobsters, packaged cubed lobster for cocktails, fish, cakes and pies, and a large assortment of fruits, berries, and vegetables which we ourselves had packaged after buying them at special bargains.

"At once, we commenced to use these re-frozen packages to test their edibility, color, etc., and this is what we found.

Taste Tells the Story

"So far, we have used eight steaks and we can both testify that the quality was so near to that we expect of our packaging normally, that little difference could be detected. In fact, last evening we each had a porterhouse steak, bought when the market was away off here last Fall, that simply left nothing to be desired.

"And yet, the book would say you can't do it, for most of our steaks were almost completely limp when we discovered this near tragedy. We have tried spinach, beans, berries, lobster, and are still trying, but so far we are thrilled to find out how high the quality is of all things sampled.

"Actually, outside of losing the ice cream and some minor items such as a couple of pies which did not re-freeze too well, we have lost nothing."

"Oh, yes," Mr. Chamberlain concluded, "we ordered an electrician to rewire the garage the next day!"



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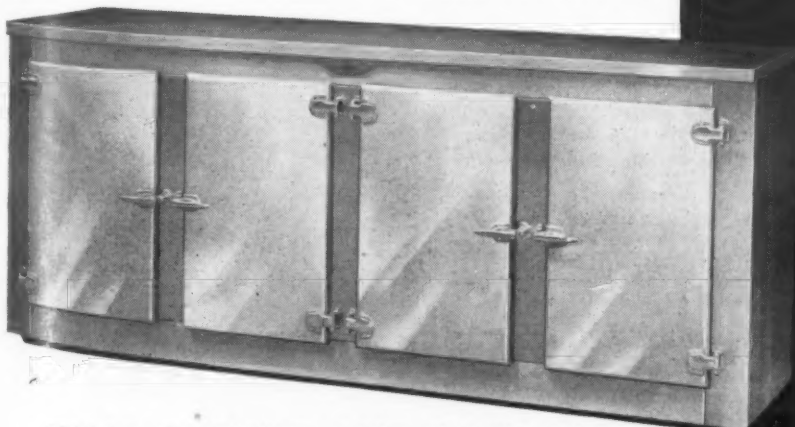
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Field Report

Reconditioned Trade-Ins Mold Prospects Into Good Customers for New Refrigerators

By George Hanning

FORT WAYNE, Ind.—Trade-ins? Who's afraid of trade-ins?

Certainly not C. W. Cutshall, owner of Schneider Kaiser Co., appliance store in downtown Fort Wayne.

"We'll take all the trade-ins we can get," says he, "and do a profitable business on them. Those traded-in refrigerators or washers bring in plenty of new business.

"Assuming I can get new merchandise, I would like to have a dozen used washers in my basement right now," he asserted.

This is what Mr. Cutshall does with his trade-ins that makes him so enthusiastic about them:

When a customer has a used refrigerator to trade in on a new unit, Mr. Cutshall gives him a fair price for his box. He then takes this box and reconditions it so that it will give satisfactory service.

Onto the sales floor it goes. Soon it is being ogled by a prospect who has never used an electric refrigerator before and is leary about putting out \$200 or \$300 for a new one, Mr. Cutshall indicated.

Assured that the used box will give him satisfactory service and finding that it is reasonably priced, the prospect quickly becomes a customer. Slapping down a down payment, he has the box installed in his home and begins using it.

In his own home, the customer learns to use the refrigerator, finds out the many advantages it offers, and sees the money it saves.

When he goes back for his next payment he is told by Mr. Cutshall that, if he so desires, he can apply the money he has already invested in the used box, plus an amount sufficient to cover the down payment required by Regulation W, on a new model refrigerator.

Customers usually jump at this offer, according to Mr. Cutshall. If not convinced that he wants a new refrigerator at that time, the customer has up to 90 days to decide to buy.

When the customer has the used box for more than 30 days, however, a fair rental on the used unit is deducted from the amount the customer has paid and the remainder is applied on the new refrigerator.

Thus, under this system, the used boxes are kept in circulation working to make customers for new model refrigerators all the time. And they keep the customers coming back to Schneider Kaiser Co., according to Mr. Cutshall.

"Best thing about this system is that it works fine," Mr. Cutshall grinned.

In addition, apartment house owners are always good prospects for used refrigerators, he declared.

They seem to feel that when they put in a new refrigerator and a tenant kicks it around for a couple of months, they have a used one on their hands anyway, so why not install a used one in the first place.

There are not so many cash customers around as there used to be, Mr. Cutshall finds.

"Today," he said, "the easy money that was floating around during and right after the war has largely disappeared.

"Factory workers who were then getting \$120 a week are now bringing home \$75 and the ones then pulling down \$75 are now earning \$50. With prices much higher now than then, they can't spend as freely as they could."

More of his customers are now buying on time, he revealed, and some are finding the 33 1/3% down payment required by Regulation W a bit too much for them to swing.

Mr. Cutshall said that he was not in favor of the abolition of this regulation, but he opined that it

could stand some revision in the matter of down payments.

He suggested a schedule of down payments something like one third on \$100 sales, 15% on \$200 sales, and 10 to 12% on \$300 sales and over. This, he thinks, plus longer payment terms on the higher priced merchandise, would be more suitable for appliance prospects, who are known to be good credit risks but can't muster enough for a down payment under present conditions.

"I had one customer in here a while ago who was inquiring about time payments on a refrigerator. When I told him he had to pay one third down and the remainder in 12 months, he wanted to know if the government thought that a depression was coming since they wouldn't let his payments run longer than a year."

On the question of home freezers, Mr. Cutshall has some very definite opinions, too.

"The public must be told how freezers will save them money," he emphasized. "Freezer manufacturers ought to forget about brand advertising and promote home freezers as such, educating the public in how to use them properly," he asserted.

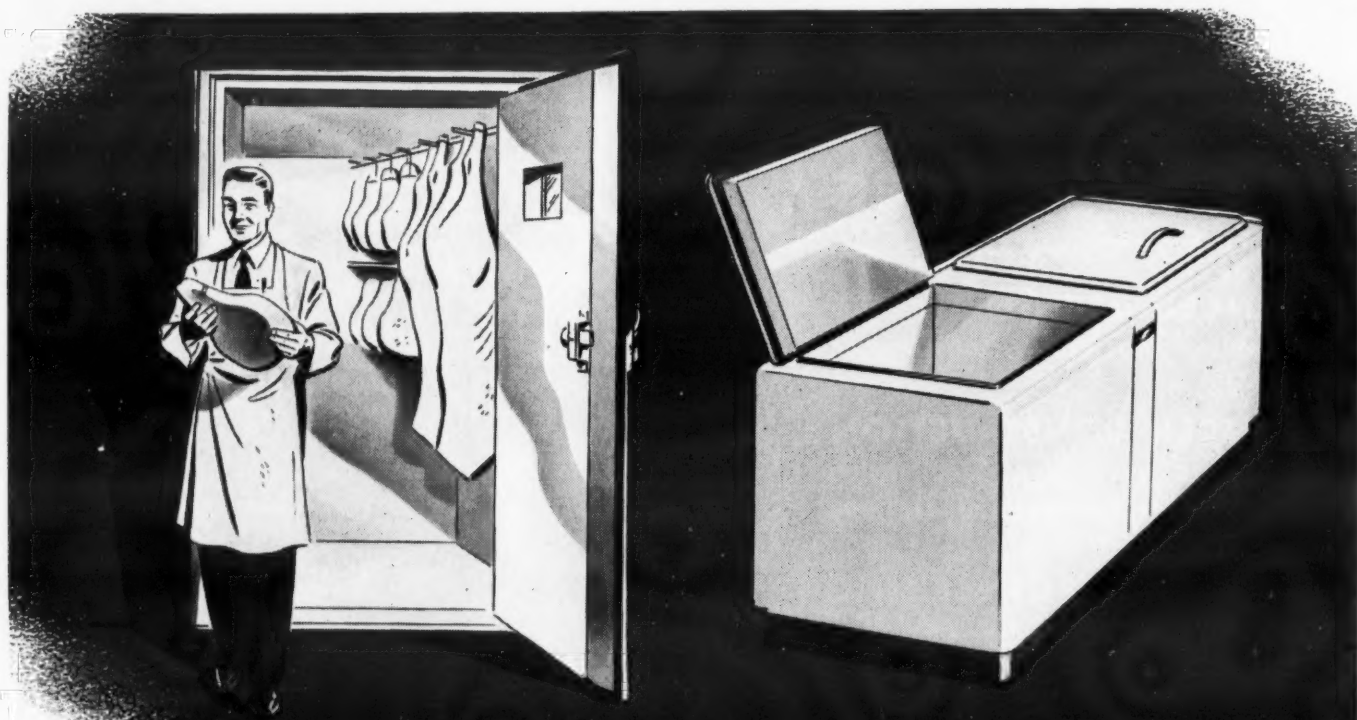
"The refrigerator manufacturers had to do it 20 years ago and they did a good job. In those days a prospect for a refrigerator wanted to know how much it was going to cost him to operate one.

"When told it would cost him \$3 or \$4 per month, he raised his hands in horror. He didn't stop to realize all the savings in food wastage and the other advantages of better refrigeration he was getting for that \$3 or \$4.

"Today, you never hear a prospect for a refrigerator ask how much it is going to cost to operate. He has been taught what a refrigerator will do for him.

"The same work is needed now on home freezers. The housewife cannot save money by buying a piddling little 8 oz. package of peas and tossing it in the freezer. She must learn to buy in large quantities and use what she stores as she needs it."

Mr. Cutshall has owned the Schneider Kaiser Co. for the past two years. He has worked for the company for 18 years, however. The firm has been in business for 28 years in all, he said.



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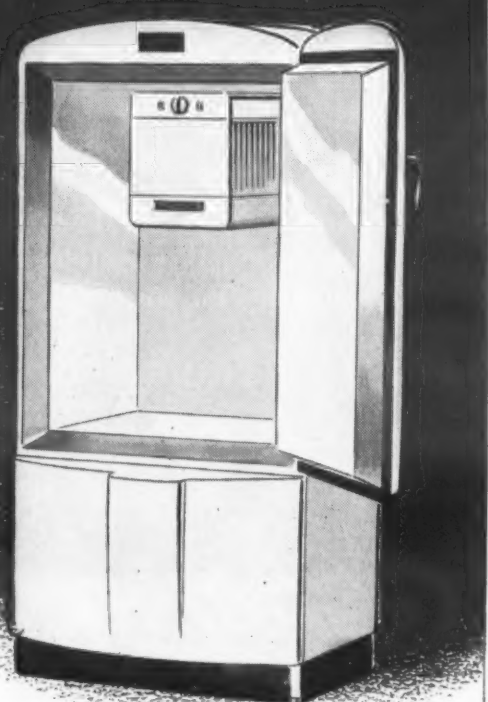
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Agreement Between Mfr. and Agent:

Business Guide Outlines 12-Points Vital To Drafting of Mfr.'s Agent Contract

NEW YORK CITY—Finding a disposition on the part of a great number of manufacturers' agents, especially newer ones in the field, to operate without definite written sales agreements, the Commerce and Industry Association of New York, Inc., 233 Broadway, has announced publication of a guide for contract forms, compiled as the result of a survey just completed by its Industrial Development Bureau.

"Those who operate without agreements pointed out that a contract is of little value in holding two parties together if either or both refuse to carry their share of responsibility," Thomas Jefferson Miley, secretary of the association, declared. "They made the further point that the most important quality needed in the relationship between manufacturers and agents is common honesty—honesty on the part of the agent to carry out his obligations, on the part of the manufacturer to pay for work performed."

"Experience of older companies in the field, however, demonstrates the wisdom of reducing to writing—by contract or mutual exchange of letters—points agreed upon by both parties at the initiation of their association."

In the light of these divergent views and despite argument to the contrary, analysis of the survey indicated that the agent who undertakes the task of representing a manufacturer without some form of written agreement is invariably inviting trouble.

While a blanket or standard form of contract is not recommended, the

association emphasized that, since every industry has its own set of peculiarities, each agreement should be drawn to fit the case in hand, with the terms clear and explicit but with no endeavor to provide for every possible contingency. Such incidental situations, it was pointed out, can be covered by supplemental letters approved by both parties.

Essential points to be covered by a contract or agreement were noted as follows: (1) Appointment of agent and territory covered—definite bound-

ary lines should be given to avoid misunderstanding; (2) Products, with special provision for new lines; (3) Duties—in addition to selling; (4) Commissions, including "split" and extra-territorial fees, etc.; (5) Customers' queries and correspondence; (6) House accounts; (7) Credit responsibility; (8) Advertising assistance, sales promotion, and samples; (9) Sales price; (10) Contract duration and renewal option; (11) Arbitration; (12) Assignment of contract.

Prior to signing a contract, the association recommended investigation of the manufacturer's financial and commercial background along these lines: (a) Date of founding, etc.; (b) Plant facilities; (c) Financial status; (d) Complete information on product; (e) Commission schedules; (f) New manufacturer's discount schedule; (g) Data on the extent of distribution; (h) Adver-

tising and sales promotion material available."

"A prime consideration in favor of a written agreement is to provide for eventualities on the death or withdrawal of either party," Mr. Miley noted. "The written word is definite. With verbal arrangements, their application can be misconstrued by heirs and successors who do not necessarily understand one another as their predecessors did. And memory dies with its owner! A good contract is insurance against litigation, for you don't make money in a courtroom."

Calif. Firm Named 'Palo Verde'

BLYTHE, Calif.—Palo Verde Refrigeration Co. is the firm name under which Leon W. Risner and Richard H. Rice are conducting business in Blythe, Calif.

Carnegie Steel Buys Crane Cab Cooler from Dravo

CHICAGO—Dravo Corp. has announced purchase of one of its crane cab coolers by the Carnegie-Illinois Steel Corporation for installation in a soaking pit crane cab at its South Works here in Chicago.

Installed to operate under what are regarded as severest conditions, the company says the cooler will maintain in the summer an inside temperature of 85° F. with an ambient temperature of 160° F., and in the winter 72° F. with an outside temperature of 0° F.

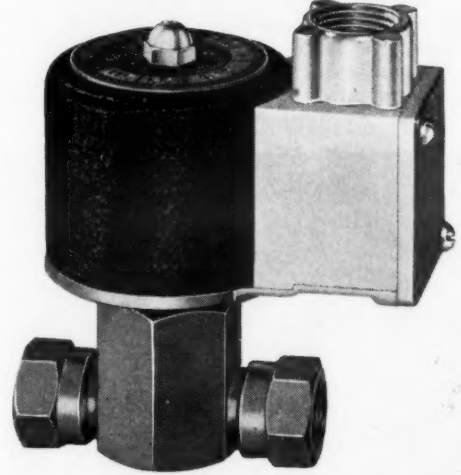
Use of the Dravo cooler will remove all fumes, gas, and dust from the continuous supply of air that flows through the crane cab, the company points out.



2 Tons Freon

Brass body, renewable soft Neoprene seat. Come-apart construction with rotatable coil and aluminum junction box. 3/8" F.P.T. connection.

SV 21



SV 11

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SV 31 and SV 51

3 Tons and 5 Tons Freon

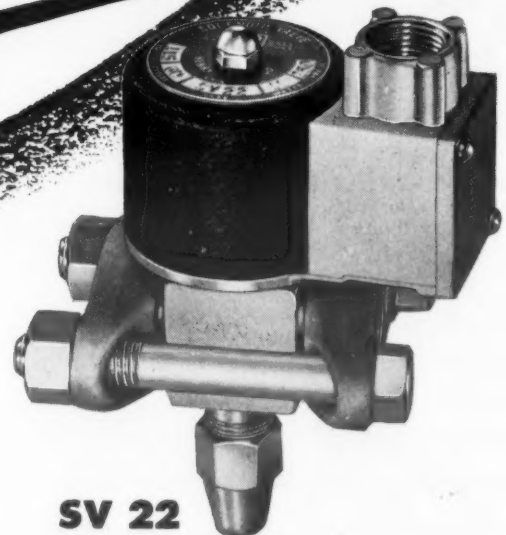
Brass body, come-apart construction with rotatable coil housing. Two piece impact plunger with direct acting metal-to-metal seat on SV 31. Neoprene seat on SV 51. Manual operating stem. 3/8" and 1/2" F.P.T. or solder connections.



SV 101 and SV 201

10 Tons and 20 Tons Freon

Brass body with flanged come-apart construction. Pilot-piston operated. Connections 3/4" F.P.T. or 7/8" O.D. solder.



SV 22

10 Tons Ammonia

Steel body with come-apart construction and hardened steel renewable seat. Aluminum junction box. Manual operating stem. 3/8" and 1/2" F.P.T. flanged connections.

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Supermarkets To Retain Appliances, Survey Hints

NEW YORK CITY — Major and small electrical appliances are among the nonfood items now being handled by supermarkets across the country, according to a current survey by *Super Market Merchandising*.

Major appliances, according to the survey, are handled by 3.1% of the supermarkets, while small appliances were a part of the stock of 12.5% of this type of store.

The survey which shows a trend for the supermarkets to become self-contained shopping units, covered 3,692 supermarkets in 449 cities in 45 states. Although the movement seems to be underway throughout the nation, the greatest nonfood expansion appears to be in the southern and far western portions of the country.

Cities of 50,000 to 100,000 populations topped the list of stores containing separate nonfood departments, the figures indicated.

R. L. Benson Appointed To Head Crosley Research

CINCINNATI — Appointment of Ralph L. Benson to head the refrigeration and appliance section of the research and advance development department of the Crosley Division, Avco Mfg. Corp., has been announced by L. M. Clement, director of research and engineering.



Mr. Benson, except for recent short terms with the Universal Cooler Division of International Detrola Corp. and the Liquid Carbonic Corp., was formerly chief engineer of the refrigerator section of the special engineering division of Avco Mfg. Corp. Prior to that he was connected with Gibson Refrigerator Corp. and Kelvinator.

Counsel Explains Proposed Trade-In Law, Sees No Reason for Current Dealer 'Hysteria'

By George M. Hanning

DETROIT—The city's position on a proposed ordinance to license and regulate stores handling trade-ins—a proposal which has aroused a group of electrical appliance dealers to seek its defeat—was clarified last week by Nathaniel H. Goldstick, assistant corporation counsel for the city.

The City of Detroit merely "wants an ordinance requiring purchasers of second-hand articles to keep adequate records on those articles so that they may be easily traced," Mr. Goldstick told the NEWS.

Finding no cause for the current "wave of hysteria" over the legislation, Mr. Goldstick emphasized that "the present draft of the proposed ordinance has been drawn up for purposes of discussion only."

"Whether the trade-in store is

licensed, or has to pay a fee is unimportant to us. But where there is a sale of second-hand articles, we want a record," he explained.

Mr. Goldstick pointed out that the present proposal is based on an ordinance covering second-hand stores which has been on the city's books since 1896. However, until Dec. 2, 1942, persons who dealt exclusively in furniture and household goods were specifically exempted from the provisions of the old measure.

During the summer of that year, there had been an epidemic of thefts from schools which involved furniture and such items as typewriters and adding machines, Mr. Goldstick said. These could not be traced.

At police insistence, then, the exemption for furniture and household goods dealers was repealed. The furniture dealers strenuously objected, and, as a result, the city agreed to suspend enforcement until after the war.

Now, however, the city wants these dealers covered. Mr. Goldstick stated that he has been authorized to compromise on various points in the law so that it will put no undue or unnecessary strain on the businesses involved.

One point that he is not permitted to compromise on though, is the record-keeping, he indicated. He believes that all merchants should maintain records of all second-hand appliances, for instance, where the trade name, serial number, and names of the persons from whom purchased and to whom sold are listed.

"Many dealers objected to the odium of having business referred to as a second-hand store," he said. "That is why we called them trade-in stores in this draft."

"Appliance dealers, among others, can do a lot to help write this ordinance," he asserted. "I shall be more than happy to meet with any interested group at any time to explain the proposed ordinance and what it is for and to get their ideas on how best to word it."

"It is still very much open to discussion and change," he emphasized. The text of the drafted ordinance was printed in last week's issue of the NEWS.

As it now stands, it would require a dealer who buys or accepts used articles as trade-ins to:

1. Secure a license by payment of \$25 and execution of a \$200 bond with one or more sufficient securities.
2. Record in a book descriptions of persons from whom second-hand articles are purchased, and the date and hour of purchase. The book would be open to police inspection at all times.

3. Tag and number all articles purchased and record numbers in the book.

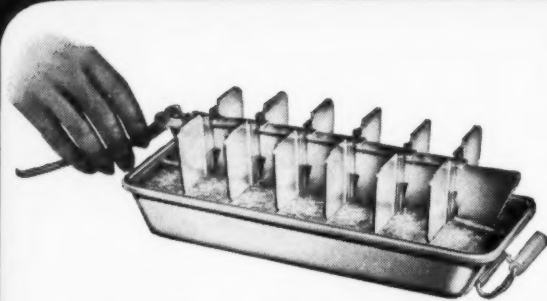
A dealer would not be allowed to sell used articles or remove them from his store for at least 15 days after acquisition. It would be illegal for him to buy or accept used articles from intoxicated persons, habitual drunkards, thieves, associates of thieves, fences, or "any person he has reason to suspect to be such."

Violation of the ordinance would, upon conviction, result in a fine of not more than \$500 or imprisonment for not more than 90 days or both.

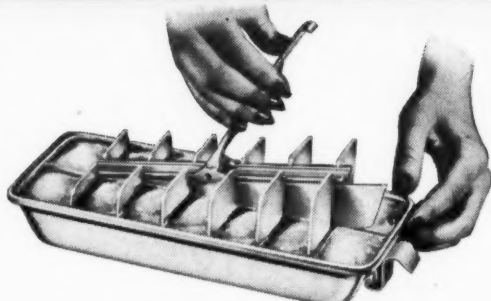
Mr. Goldstick indicated that other provisions could be put into the ordinance to better "police" dealers. He pointed to the electrical appliance business as one that has long needed such policing.

Early this month, the embryo Detroit chapter of the National Electrical Retailers Association rallied about 50 dealers to a meeting and resolved to meet with Mr. Goldstick and with Police Commissioner John F. Ballenger in order to have the measure killed before it reached the city council.

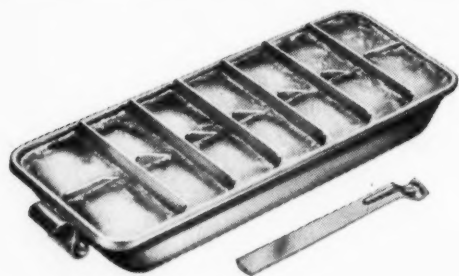
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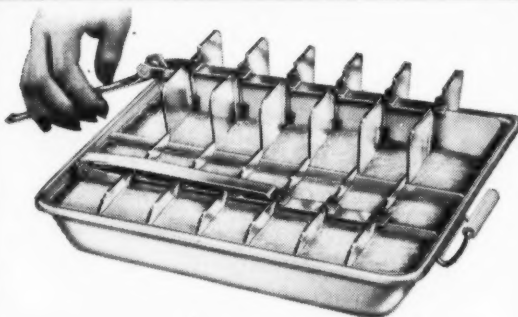
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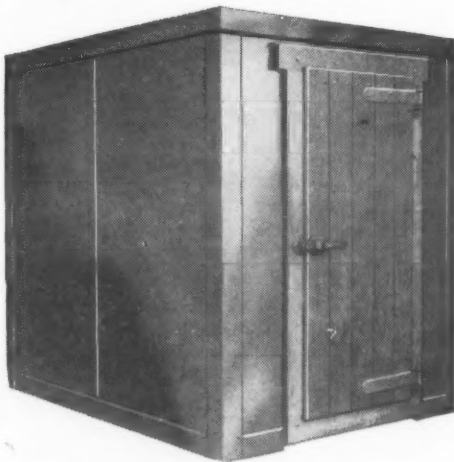
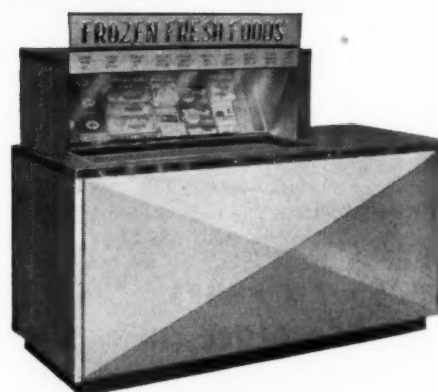
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Best looking on the market. Rapid cooling, high capacity. Lids slide away or lift out. All compartments can be open at the same time.

Rogers refrigeration units are finished in Stainless Steel or polished Aluminum.

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Write, wire or phone today for information on franchise.

Immediate Delivery!

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ROGERS

Industries

BOX 372-AC

DEMOPOLIS, ALA.

FAST FREEZING
QUICK RELEASING
ICE TRAYS BY INLAND



'I Can't Afford Union Men':**Union Squeezed Him Out of \$6,000 In Installation Work, Omaha Dealer Protests**

OMAHA, Neb.—Allen L. Mahan, proprietor of the Al Mahan Appliance & Refrigeration Works at 5001 Leavenworth St., reports that labor unions have squeezed him out of two profitable jobs because he would not adopt a union shop. He added that his trouble stemmed from the fact that "I work for myself and can't afford to hire a lot of men," and that he stands to lose about \$5,000 on the two jobs.

Mr. Mahan's difficulties began after he secured a contract to install an air conditioning system at Birchwood Club near Omaha. All equipment had been set in place and he was ready to install 80 ft. of copper tubing, when the AFL Steamfitters Union stepped in, he recounted. The union said the tubing should be installed by union men, and warned they would picket the place if Mr. Mahan started working. Pressure brought to bear included cancelling a union party or two at Birchwood.

The Omahan offered to join the union but was told he couldn't because he is a contractor. Then, Mr. Mahan stated, he offered to hire two union men to do the work, but was told he couldn't do that unless he adopted a union shop from then on.

"But I can't afford to pay \$100 a week for a union man to work on household refrigerators," the Omaha dealer declared.

When the Birchwood job was stalled, the club cancelled the contract, and the contractor brought a district court suit against the club in an attempt to collect \$3,500 in expenses and \$2,000 anticipated profit. Mr. Mahan pointed out that he could have installed the copper tubing himself and easily, as he has had 16 years experience in this type of work.

Just recently the contractor lost another job because, he said, the union applied pressure. This was an air conditioning job at Russell Stover Candies in Omaha. Mr. Mahan explained that he had laid tubing "to within 10 ft. of the air conditioning unit" when union men on the job staged a two-hour "sitdown."

The Omaha contractor asserted that he was forced to drop the job

at a possible loss of \$500, and a large air conditioning firm with a union shop completed the job.

Charles McNeil, business representative of Steamfitters Local 464, when told of Mr. Mahan's statement, commented that "Air conditioning is within our jurisdiction, and of course, we try to do all the air conditioning work in Omaha."

Mr. McNeil said his union hasn't had a work stoppage in Omaha "in a number of years," and added that he knows of no sitdown strike at the candy store.

REMA Plans Establishment of Milk Cooler Product Section

PITTSBURGH—A new milk cooler product section will be organized by the Refrigeration Equipment Manufacturers Association for members who manufacture this type of equipment, it has been announced here.

REMA has had product sections fully organized for the past six years and was the originator of this type of program for the refrigeration industry, an association bulletin declared.

Chamber of Commerce In DeLand, Florida Asks Locker Plant Capital

DELAND, Fla.—If any person with capital to invest is interested in construction of a frozen locker plant in DeLand he is asked to contact the Chamber of Commerce office, or any member of the C. of C. Industrial Committee.

The committee met at the Chamber office with Phillip S. Coe, representative of Southern Frozen Foods of Florida, Inc. from Orlando, who said that a recent survey he had made showed that DeLand has found need for and wants a frozen food locker plant.

Mr. Coe described the details of building and operation of such a plant. The committee decided to take the matter under advisement for further study, after hearing the concern representative ask for local ownership of the plant. Cost of the proposed structure will run about \$50,000, although the committee said

it favored putting up a smaller plant to start off with.

The company plans to construct 15 plants in Florida this year, Mr. Coe told the committee. Two are already under construction in Palm Beach and Fort Pierce, and others are proposed in DeLand, Leesburg, Eustis, and Kissimmee.

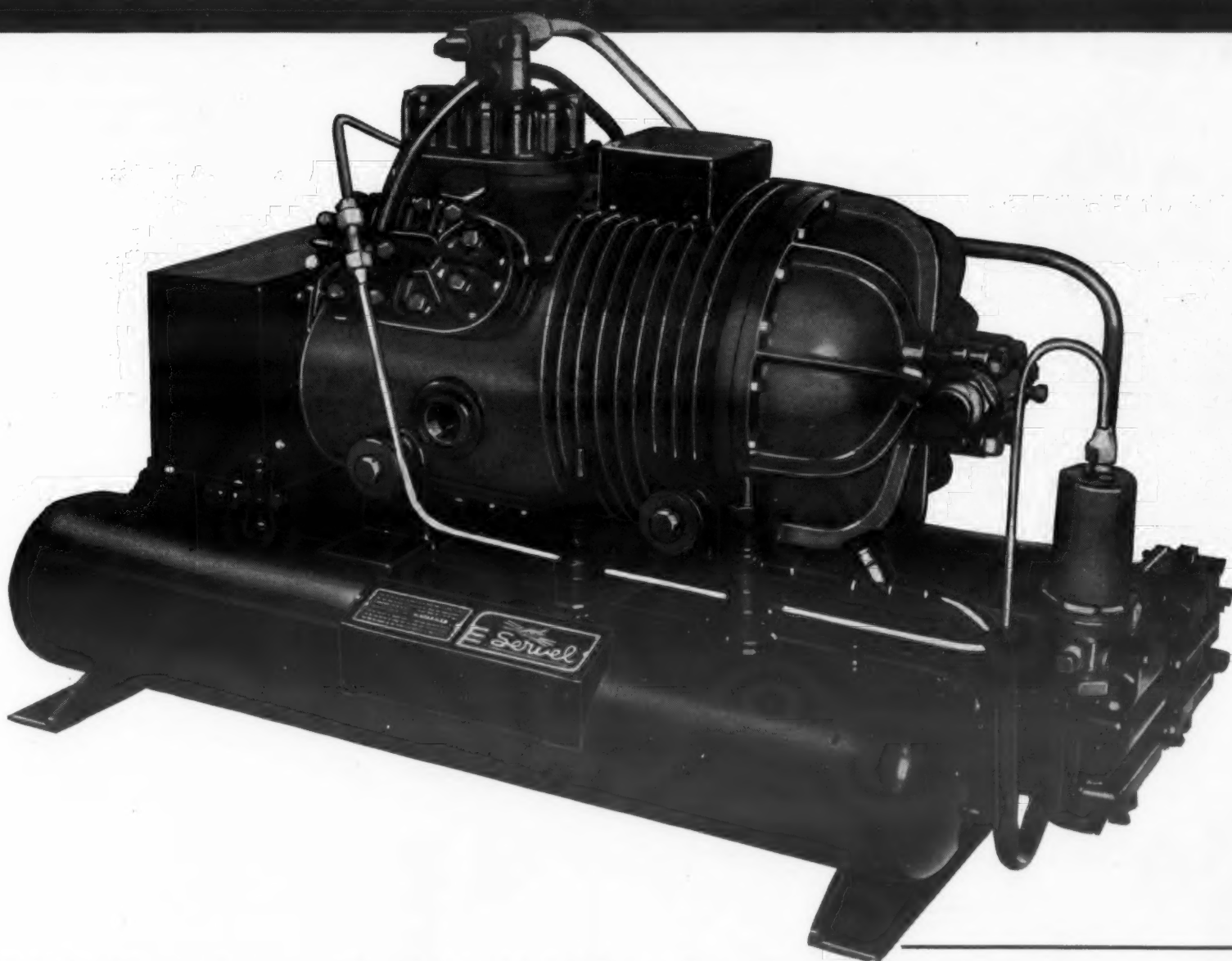
Max Acree, committee chairman, presided over the meeting.

Florida Equipment Firm Moves Into New Building

PENSACOLA, Fla.—Savell Refrigeration Equipment Co. has recently moved into its new building at 121 E. Government St. here, according to a company announcement.

The new structure, located next door to the former location, is 40 by 140 ft. and features fireproof construction throughout with modern fixtures and fluorescent lighting.

Owned by Bernard Savell, the company specializes in commercial refrigeration equipment and carries restaurant, taproom, meat market, and grocery store equipment.

FOR BIGGER JOBS**... Husky, compact****6-CYLINDER SUPERMETICS**

Six-cylinder Servel Supermetics are now rolling off the production lines. Last month we announced a series of four-cylinder sealed-type integral horsepower models, and now even bigger units are available in limited quantities.

These husky, compactly designed units offer you a choice of 20 different models from 1 HP to 3 HP in low- and medium-temperature designs for both air- and water-cooled applications.

FOR BIGGER JOBS—You'll find these completely modern, highly efficient condensing units ideal for walk-in freezers, small locker plants,

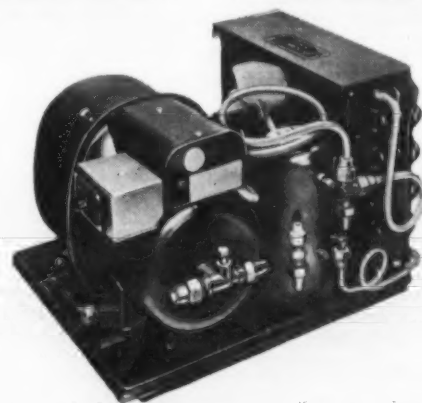
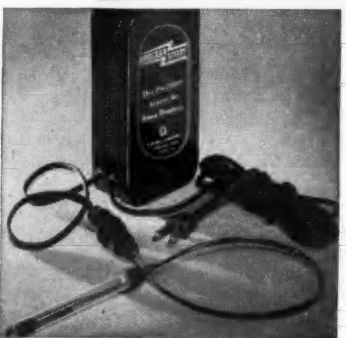
dairies and similarly large applications. Every model includes all the profit-building features you have enjoyed in Servel's fractional horsepower Supermetics. Space requirements are exceptionally low.

SUPERMETICS ARE COMPLETELY WIRED—All that's necessary is to connect the electrical circuit, tubing lines, and with water-cooled units, the water supply and drain. This means lower installation costs, added profits.

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FIRST IN PREFERENCE
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IN PERFORMANCE



It's a smart appliance dealer (and manufacturer, too) that plays up *Fiberglas** in his selling—takes full advantage of all the advantages Fiberglas Insulation provides.

For not only does Fiberglas permit you to talk "greater efficiency" . . . "lower operating costs" . . . "longer life" . . . in

selling Fiberglas-insulated appliances, but your customers know that you're talking facts. Know it from their own experience. Yes, millions of Fiberglas-insulated ranges, water-heaters, refrigerators, home freezers and other appliances have sold Mr. and Mrs. America on Fiberglas. All you have to do is tell them "it's insulated with Fiberglas". Seems easy? *It is!*

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Subscription Rates: U. S. and Possessions, Canada, and all countries in the Pan-American Postal Union: \$4.00 per year; 2 years for \$7.00. All other foreign countries: \$6.00 per year. Single copy price, 20 cents. Ten or more copies, 15 cents each; 50 or more copies, 10 cents each. Send remittance with order.

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VOLUME 51, No. 11, SERIAL No. 956, JULY 14, 1947

The 'Recession' Is a Phoney

EVERYWHERE we go around the industry, we find that manufacturers, dealers, distributors, and servicemen are so busy—and so worried—that they're almost beside themselves.

They're extra busy because they're moving heaven-earth-and-hell to produce or acquire the merchandise which their customers need and want.

They're extra worried because they hear that a "recession" is either here or coming.

On the one hand, they can't get enough raw materials, or finished products, to satisfy the clamor of their customers. On the other hand, they think they should reduce their inventories (if they have any!) and their forward commitments because they read in the papers and the confidential bulletins that "hard times" are returning.

Thus the business man is neatly boxed in—he doesn't know which way to turn.

All we can say is: if there's a "recession" in the refrigeration, air conditioning, and home appliance business, nobody of consequence has been able to detect it. For instance:

There's a rumor afloat that home freezers aren't going well. Who says? In the last three weeks the writer has visited two major manufacturers of home suppliers, and one producer of condensing units for freezer assemblers. Both of the former stepped up their production of complete home freezers by more than 50% during the last month. At the plant of the latter, a full-time resident "expediter" is still on the job trying to divert all the condensing units he can from this firm's production line to the plant of the home freezer manufacturer which hires him.

Household refrigerators, like automobiles, still bring "black market" prices in some places. So does "Freon." Even ranges, water heaters, and automatic washers in some localities occasionally are sold at a premium. Television sets—which are in so much demand by bars—are bid up extravagantly.

Several producers of commercial refrigeration equipment have told us that their backlog of orders is growing, rather than receding.

And what about air conditioning? Well, that enlarging market has been neglected as badly as the bride whose groom was kidnapped right after the wedding ceremony. Production this year has been negligible compared to the industry's opportunities. When anyone asks you how many unit air conditioners will be sold this year, you simply answer: "As many as the manufacturers are able to produce."

Especially is there a terrific demand for air conditioning units abroad. Foreign buyers seem to want air conditioning more than any other specialty item America has to offer.

In the Middle West—and particularly in the smaller cities and towns which tap the immense purchasing power of farmers—you don't hear much talk about a "recession."

In the East you do. Yet, if you travel around the Eastern seaboard, you'll find that in the better restaurants you still have to stand in line for a table, that you have to fight for a taxicab, and that the hotel situation seems worse than ever. (On recent trips to Massachusetts, Connecticut, and New York the writer would have slept on park benches if good friends hadn't put him up for the night in their homes).

What people are talking about (a recession?) and what actually is happening (boom times) don't seem to jibe at all.

How New Housing Act Regulates Cooling Units In Amusement Halls

WASHINGTON, D. C.—All applications for amusement, recreational, or entertainment construction projects under the new Housing and Rent Act will be sent directly to Washington where they will be acted upon by the Non-Residential Construction Branch, Office of the Housing Expediter, announces Housing Expediter Frank R. Creedon.

The installation of air conditioning equipment, bars, bowling alleys, furnaces, lighting equipment, marquees, paneling, ventilating equipment, plumbing, and certain other types of equipment in amusement projects will be covered by the regulation providing they are nailed, screwed, bolted, connected, or cemented to the building, or installed on a base built for the particular item, he states.

OHE's field construction offices are being discontinued but application blanks (Form OHE 14-171) will be available in these offices until approximately July 31, and will also be available in the 600 OHE Area Rent offices throughout the country.

The new Construction Limitation Regulation (CLR) replaces VHP-1 which had been in effect since March 26, 1946. VHP-1 was revoked simultaneously with the issuance of the Construction Limitation Regulation, except that any VHP-1 authorizations already issued for work covered by the new regulation remain in full force and effect.

This means that anyone already authorized under VHP-1 to do work on a recreational or amusement project may continue the work, and also means that he is still bound by the restrictions of the VHP-1 authorization. Revocation of VHP-1 does not affect any compliance action for past violations of VHP-1.

Enforcement of the construction permit regulation will be under the direction of the OHE Compliance Division which will continue to maintain regional offices and inspectors in all sections of the country.

Approval of applications under CLR will be on the basis of negligible impact on the housing program, essential community facilities, necessary maintenance and repair, or severe and unusual hardship. A project will be considered as having

negligible impact if it uses none or only small quantities of building materials still in tight supply.

Examples of materials still in short supply are cast-iron pressure pipe and fittings, cast-iron soil pipe, electrical service equipment and wiring devices, galvanized steel sheet, gypsum board and lath, hardwood flooring, millwork, nails, construction grades of plywood, steel and wrought-iron pipe, water closets and bowls.

The regulation includes a list of the type of buildings and other structures which will require permits if they are used for or in connection with any of the following purposes: Amphitheaters, amusement arcades, amusement piers, amusement parks, arenas, assembly halls used primarily for amusement or recreation purposes, athletic field houses, band stands, bars, bath houses for swimming, baseball parks, billiard and pool parlors, bleachers, boardwalks, boat clubs, bowling alleys, cabanas, carnivals, cocktail lounges, country clubs, canteens, community recreation buildings, dance halls, gambling establishments, grandstands, gymnasiums, golf clubs and golf courses, golf driving ranges, music shells, night clubs, race tracks of all kinds, recreational clubs of all kinds, riding academies, rodeos, roller coasters and similar devices, shooting galleries, skating rinks, seasonal camps used primarily for amusement or recreation, slot machine establishments, stadiums, swimming pools, table tennis establishments, taverns, theaters, and any other building used in connection with an amusement or recreational project.

State and county fair buildings and structures for non-profit agricultural, livestock, or industrial expositions or exhibitions, are exempted under the new regulation. However, buildings for any commercial fair, exposition, or exhibition will require permits.

The small job exemption of VHP-1 is retained under the new regulation in a modified form. This provides that any amusement, recreational, or entertainment project can be constructed without a permit if the cost is less than \$2,500. If the project involves a residential structure, the exemption is \$200.



IT'S MORE THAN JUST ANOTHER REFRIGERATION PLATE

In thousands of freezer cabinets, frozen food locker plants, sharp freeze shelf stacks and similar equipment all over the country Hubbell-Yoder Refrigeration Plates are doing the job better than it has ever been done before, and at a lower cost. They have established a new and vastly higher standard of operating efficiency and economy for

low temperature refrigeration. They have set up a new mark for all other freezing units to shoot at. That briefly, is what the Hubbell-Yoder system of Complete Surface Freezing means when the chips are down. Would you like to know how it can be adapted to your requirements? Write, wire or phone.

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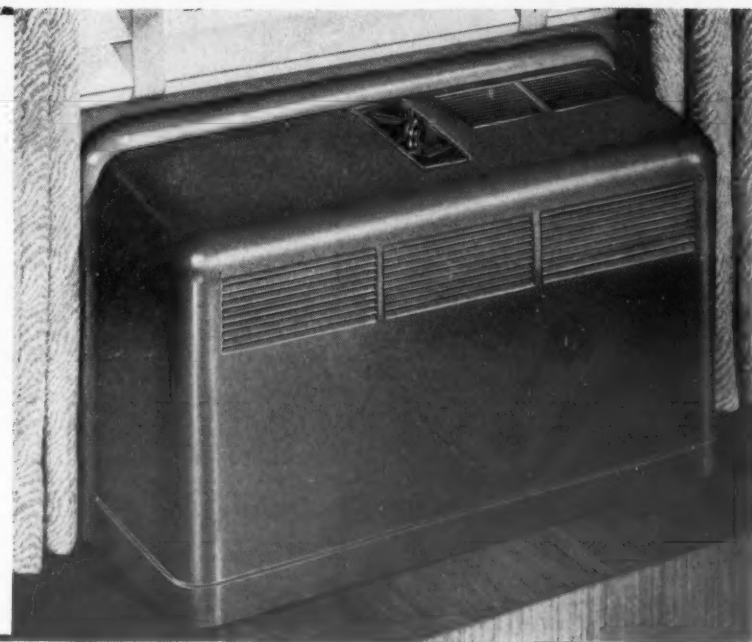


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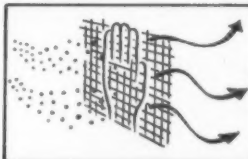
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The MITCHELL "cooling plant" removes heat . . . brings cool comfort quickly. Cooling is equivalent to melting 1000 pounds of ice per day.



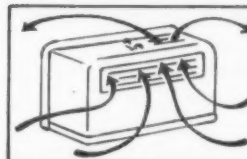
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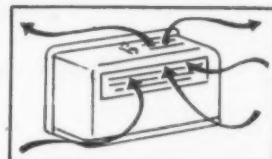
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Perfect circulation of cool filtered air to every part of the room—no drafts or harsh air currents—just gentle, cool comfort, perfectly controlled.



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The MITCHELL Room Air Conditioner performs all five functions of modern, scientific, genuine Air Conditioning . . . cools, dehumidifies, filters, circulates, ventilates. In the MITCHELL Conditioner, these five functions are performed with superb dependability because the unit's advanced type, hermetically-sealed cooling mechanism, electrical system, and other components have been built to operate in perfect harmony and precision at all times. The results are startling and packed with selling appeal. Your prospects will want nothing less than MITCHELL controlled-weather comfort that satisfies in any kind of weather, in every season of the year. Completely portable, beautifully styled, easy to install, quiet in operation, the MITCHELL Room Air Conditioner gives you "Selling Horizons Unlimited." Write for full details today on this profit-building Air Conditioning.

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Tell your customers about Temprite's ability to handle hot weather loads to perfection . . . with every glass perfectly cooled, every glass perfectly clear!

Tell them about Temprite's new all stainless steel coils that eliminate metal contamination, and deliver top-flavor beer!

Compact, highly efficient Temprite coolers provide trouble-free operation and greatly reduce service costs. Don't let your summer-profit months slip away. Wire Now!

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At Their 48th Annual Convention:

Grocers Told Display Cases Help Self-Service Store Cut Expenses, Up Profits, Double Sales

SAN FRANCISCO — Self-service and pre-packaged fresh meats and fruits and vegetables were predominant topics at the forty-eighth annual convention of the National Association of Retail Grocers here recently.

More than 5,000 grocers attended the five-day meeting, which also featured exhibits by several manufacturers of refrigerated cases. One session of the convention was devoted solely to meat merchandising, with speakers agreeing that the next big step in this field will be self-service, prepackaged meat departments.

Specific examples of how sales and profits can be increased for grocers through the use of self-service cases, prepackaging, and air conditioning were cited at the meeting by John L. Morrison, who operates a market in Norman, Okla.

Sales volume was doubled, operating expenses decreased, and net profit boosted from 5.7% to 8.1% of sales volume as a result of modernizing his store, Mr. Morrison revealed.

"My store is located on the main street of a town of 18,000 population," he recounted. "Early in 1946 we lost a Navy base of approximately 16,000 sailors together with many civilian employees. I was at that time doing an annual volume slightly in excess of a quarter-million dollars, but my sales began slipping and there was not too much more I could do about my overhead.

"I had thought for a long while the complete self-service idea had great possibilities, both from the standpoint of reducing overhead and increasing sales, so on Oct. 1, 1946, I converted my store from a semi-self-service store to a completely self-service store in all departments.

"My store is 50 by 120 ft.; the dry groceries are displayed in the front of the store in a space the full width of the store and running back 60 ft.

"All perishables are sold in a separate room 24 by 45 ft., which is divided from the rest of the store by a plate glass window the full width of the room. We call this room the 'Frosted Palace,' and it is kept at a lower temperature than the rest of the store by an air conditioner.

"This is as much for showmanship and customer psychology and comfort as for reducing shrinkage of perishables not on refrigeration," explained Mr. Morrison.

"We have in this room nine Hussmann open display refrigerated cases and 36 ft. of conventional dry produce racks. We use three of the open display refrigerated cases for prepackaged vegetables, four for meats and dairy products, and two for frozen foods.

Here's What Is Prepackaged

"We prepackage in cellophane all meats, both fresh and cured, all cheese that is not packaged by the supplier, and most items in fresh fruits and vegetables. Here is a list of the items that we have prepackaged in cellophane successfully: lettuce, tomatoes, spinach, corn-on-the-cob, green beans, peas, green onions, celery, cauliflower, broccoli, carrots, radishes, cabbage, peppers, Chinese cabbage, leaf lettuce, cucumbers, okra, parsnips, rhubarb, cranberries, peaches, pears, cherries, plums, strawberries, grapes, squash, limes, lemons, and, of course, meats and cheese.

"Every item has a label that carries a code date to show when it was packaged, the name of the item, its weight, the price per pound, and the price of the package. All are prepared and packaged in a separate processing room. They are then transferred to the cases and placed on display or placed beneath until they are needed on display.

"In the produce department," continued Mr. Morrison, "I was able to increase my gross margin without increasing prices since we have practically no shrinkage. Produce that is properly prepared, sealed in cellophane, and placed on refrigeration has its shelf life increased by approximately 500%."

"I find the consumer likes this method of merchandising meats and produce. The reason I say this is

that they tell me they like it, and my operation since conversion has proved it to me.

"In the eight months preceding Oct. 1 we lost 3.6% in volume of sales compared to the year before. In the eight months succeeding Oct. 1, we had an increase in sales of 63.3% over the same months of a year ago. But this is not the whole story as sales are still on the increase.

Statistics Show Improvement

"In April we had an increase of 90.6% over April of 1946; in May we had an increase of 134.7% over May of 1946. While this was happening, let us see what happened to our gross margin of profit and operating expense. Before our gross margin was 19.2%. After it was 20%. Before our operating expense was 13.5% of sales; after, it was 11.9% of sales.

"This gross margin was increased by more attention to higher profit departments while we were reducing the price of many competitive items, and the operating expense was lower while wages were increased and rent nearly doubled. Net profit before was 5.7% of sales, and after it was 8.1% of sales. Considering our increase in sales, you can see that net profits have more than doubled," stated Mr. Morrison.

For the small grocery, Tyler Fixture Corp., Niles, Mich., unveiled a brand new 10.5 cu. ft. wall type utility freezer at the meeting. Operated by a 1/4-hp. hermetically sealed, self-contained compressor, the cabinet is defrosted manually.

Front and back plate coils maintain a top temperature of 0° F. in the individual units which also come in chest and center aisle types. All types have the compressor unit attached to the box end.

Tyler Model Gets Attention

The wall-type, which attracted much attention from the grocers, is topped by a slanting display mirror reflecting the contents. Below the mirror are price strips while directly above the compressor is a bag rack. Lithographed pictures top the entire box which is illuminated by concealed fluorescent lighting.

Two sliding service doors are stainless steel with double glazing to prevent frosting. The cabinet has 4 in. of insulation throughout.

A new meat and dairy case was also introduced by Tyler at the convention. Available in 8 and 12-ft. lengths, a 36° temperature is maintained on the lower open shelf by a 1/2-hp. compressor unit.

An unusual feature is that it may be loaded from the rear through doors which swing inward.

(Concluded on next page)



FROM "SEAL" ...TO SOLD



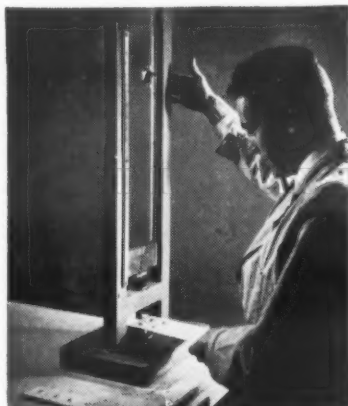
The DULUX seal identifies America's leading kitchen appliance finish.

Helps sell customers . . . keep them sold

Give added punch to your sales story by pointing out the famous DULUX seal. Even hard-to-please prospects know a good thing when they see it . . . so show them the seal that assures them color retention, mar-resistance, and pleasing appearance for years of service. You can tell them, too, that DULUX is rigidly pre-tested to insure its outstanding durability.

If your manufacturer supplies you DULUX-finished deep-freezers, refrigerators, kitchen cabinets, and kitchen appliances without the seal, ask him to include it hereafter. Don't miss out on this valuable "sales aid." It helps tell a quality sales story . . . helps bring your customers back for more!

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PRE-TESTING LIKE THIS keeps DULUX out in front. Here, an impact machine measures the flexibility and adhesion of an enamel film. One of scores of scientific tests that stimulate . . . and surpass . . . actual kitchen wear.



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AIRSERCO's VALVE ANALYZER

Short-Cuts the Service Man's Valve-Testing job



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- EXAMINES performance of valve by taking it in and out of its operating range
- ENABLES service engineer to set any thermo valve for any refrigerant.
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New wall-type frozen food cabinet shown by Tyler Fixture at the 48th annual convention of the National Association of Retail Grocers.

What Display Case Producers Exhibited At National Grocers' Convention In West

(Concluded from preceding page)

Its extra-large refrigerated, open-top vegetable display case attracted much attention at the Hussmann Refrigeration, Inc. exhibit. The case, which features the patented Hussmann "baffle plates" for natural convection, is 4 ft. deep.

Each unit is 10-ft. long and is topped by a reflector mirror behind which are located the coils and baffle plates. Compartmented to handle both loose and prepackaged vegetables and fruits, it is powered by a 1-hp. air-cooled compressor and maintains a temperature range from 36° to 50°.

The 10-ft. sections may be joined to create a longer display area and the longest one to date is a 90-ft. installation at the Lucky Store in San Leandro, Calif. This recently installed unit is powered by a 7½-hp. compressor.

The newest Hussmann product, a 3-decker dairy display case, was given a "sneak preview" at the Kraft exhibit and attracted a great deal of comment. A 6-ft. case with both lower shelves refrigerated, it boasts 50 in. of cooled shelf space and is designed for multiple installation.

Although the model on display was entirely handmade, company officials disclosed that when it gets into full production they hope to make it the first 100% mass-produced box of this type in the industry. The 1-hp. compressor maintains an average temperature of 38-40°.

Scheduled to go into production in July, a hand-tooled prototype of the Frigid-Freeze "Spot Special" received an enthusiastic reception at the San Francisco convention. A 6-cu. ft. open-top ice cream cabinet, the "Spot Special" is on rubber-wheeled castors for easy transfer to any section of the store.

Made by Refrigeration Corp. of America, it is operated by either a ¼ or ½-hp. sealed unit compressor and is of wrapped tube construction with a center plate. Vertical glass baffle plates at either end eliminate non-controllable air convection.

A glass-fronted, open top frozen food case was displayed by John Mowatt Refrigerators, San Francisco, for C. V. Hill & Co., Inc., Trenton, N. J. Thermobank refrigeration with forced convection kept the temperature range below zero. The fan was powered separately from the com-

pressor which was operated by a 1-hp. motor.

Automatic defrosting of the case attracted the grocers as did the "Add-A-Unit" construction feature which allows as many 7-ft. sections to be joined without wall space as desired. Each section requires a 1-hp. compressor.

To encourage impulse sales, the cabinet includes a full length row of "color glow" pictures above the price strips. Storage space for non-refrigerated packaged produce is provided on top of the cabinet.

A simple adjustment makes the case adaptable for ice cream and dairy products.

A new double-duty meat display case featuring an interchangeable compressor and cooling unit was exhibited for the first time by the McCray Refrigerator Co., Kendallville, Ind., at the grocers' convention.

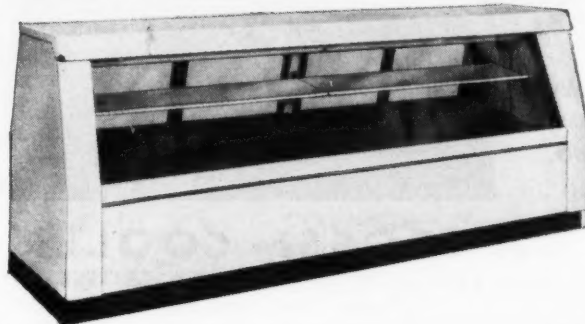
The "Koldflo" self-contained unit is fitted by eight screws to the lower rear of the case between two service doors. The compressor and fan are housed outside the cabinet while the coils extend inside. Company officials pointed out that in this position, under a scale stand, the unit took up unused floor space and added materially to refrigerated storage space.

In case of overhaul, the unit is quickly removable to make way for a substitute unit. The cabinet, which comes in 6, 8, 10, and 12-ft. lengths, may also be operated with a remote compressor.

The roomy display area is fronted with triple Thermopane glass sealed in rubber and unused space is occupied by a porcelain mezzanine. Forced convection with thermostatic control keeps the case within desired limits.

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4. ONLY TWO SURFACES TO CLEAN. The glass surfaces inside a unit are specially washed at the factory. No extra cleaning is required.

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Customers are more apt to buy what they see. That's why up-to-date grocers put frozen foods on display under Thermopane—the first complete insulating unit of its kind.

Thermopane's insulating efficiency helps prevent fogging of glass... lets customers see foods on display. It aids in preserving the temperature necessary for the safe storage of frozen foods.

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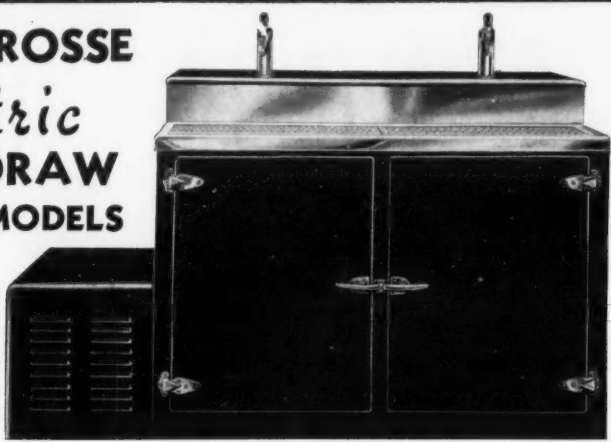
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Box 2407, Air Conditioning & Refrigeration News

What's New

Single Dial Washer --



New "Laundromat" now being introduced.

(Concluded from Page 1)

tion of Mrs. Julia Kiene demonstrated that there were only three temperatures of water necessary to cover all types of washing and that three lengths of washing time were used in washing, Westinghouse laundry department officials declare.

From a survey of consumer use of the Laundromat and Mrs. Kiene's work, a direct correlation between time and temperature used in washing was discovered.

For example, it was found that

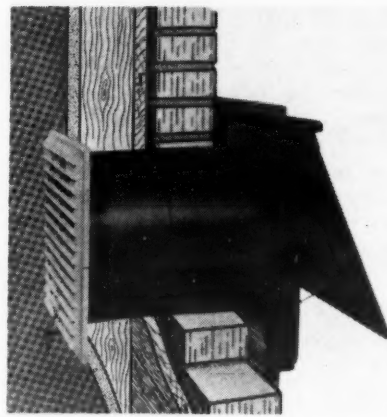
without exception heavily soiled clothes, such as children's school and play outfits, require the hottest water and the longest washing time. Furthermore, this type of clothing needing hot and long washing makes up the bulk of the home laundering.

Westinghouse engineers developed a control that would handle the two factors of time and water temperature. This control was then put through both engineering and consumer tests to prove its value.

Mr. Brownson pointed out that, although the temperature and time controls are centered in one dial, the single-dial model is as versatile in its operation as the double-dial machine. It can be stopped, started, or operations repeated or omitted at any time.

The new model retains the desk style cabinet. The sealed transmission with a five-year guarantee is also a continuing feature of the new model.

New Ventilator Has Novel Control Feature



ROCHESTER, N. Y.—Latest Fasco ventilator, manufactured by the F. A. Smith Mfg. Co. here, features a single automatic control, which is said to open and close an outside door and start and stop the fan.

The manufacturer claims that the new fan provides straight-line air movement of 450 c.f.m., which completely changes the air every three minutes in an average size kitchen. Tubular ducts are said to give unob-

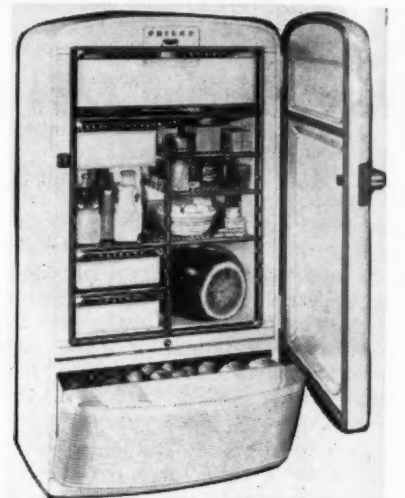
structed air flow and to hold to a minimum the collection of dirt and grease within the pipes of the ventilator.

A standard Fasco unit will fit any wall area from 5 in. to 9½ in., and additional sleeves are available to make the unit adaptable to any thickness wall. Installation may be accomplished in new or old constructions.

Outside door closes and is held tight under tension to assure its weather-tightness, according to the manufacturer. Grille, door, and duct are of steel, with the door and duct finished in a corrosion resistant paint. The grille is enameled in white.

The ventilator employs a shaded pole motor with self-aligning bearings and extra oil reserve, the company points out. Standard unit voltage is 115 v. 60 cycle a.c.

New Philco Model--



Philco refrigerator model 773.

(Concluded from Page 1)

to be specially insulated to prevent cold loss or outside condensation.

Two glass covered crisper drawers for fresh fruits and vegetables.

A sliding meat storage drawer. A separate vegetable bin that will hold 55 lbs. of non-refrigerated foods.

A hermetically sealed refrigerating machine that can be readily removed for service and which is covered by a 5-year guarantee.

The new refrigerator has a porcelain interior, with automatic light, and white enameled exterior.

It measures 59½ in. high, 30¾ in. wide, and 26½ in. deep.

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Every feature in the long Electromaster list is time-proved—wanted by practically every person who buys a range.

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This compact beauty for the small modern

kitchen (fits in space two feet square) has sales features galore. Here's big range cooking capacity, complete with the exclusive Vita-Miser deep well cooker, Kitchen-Master oversized oven, and fast Speed-O-Master surface units. It's a fast-moving item on any dealer's floor.

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What's New (Cont.)

For Office or Home

Raytheon Unit for Home--



(Concluded from Page 1)

as small as 1/250,000 in. in diameter, the company claims.

Designed to become an integral part of the air conditioning or warm air heating system, the precipitator is attached to the air intake of the furnace or the intake of the air conditioning unit, the company explained.

Air circulating through the house then, instead of returning direct to the air conditioner, is drawn down the return duct to the precipitator.

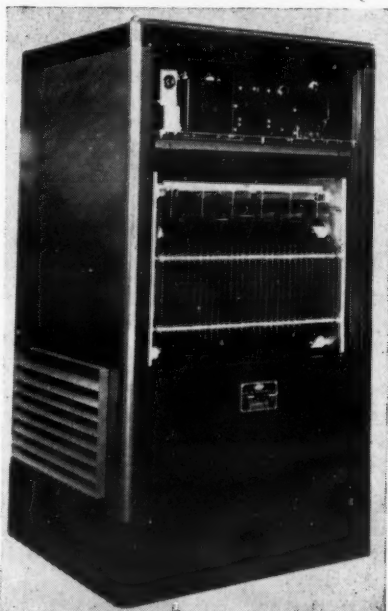
The precipitator itself consists of a power pack and an "ionizer-collector" cell, the company asserted. The power pack, consisting of special Raytheon electronic tubes, resistors, capacitors, and other components,

New 'Dana' Portable Fan Has Adjustable Width

CINCINNATI—A new portable fan for home or office use, which is adjustable in width from 24 to 35 inches, is being manufactured and distributed by the George B. Klee Co. here.

Marketed under the trade name "Dana," the fan is manufactured with a 10 or 16 in. blade, with or without guard. It may be installed, according to the Klee company, by the user with only a screwdriver.

The ventilator, housed in an ivory finished frame, operates on 110 volts, 60 cycles, a.c. current. The unit comes with an eight-ft. cord with plug.



Raytheon Home Precipitator (with door opened).

utilizes the regular house current to energize the ionizer, thus creating a strong electro-static field.

Dust particles, reaching the precipitator, pass through this electro-static field and become positively charged. Then they pass down between the vertical collector plates. These plates exert an electrostatic force, which attracts the charged dust particles in much the same way as a magnet attracts metal particles.

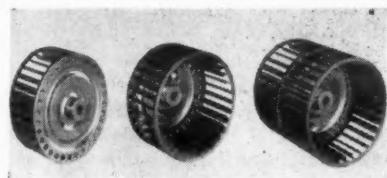
The cleaned air is then returned to the air conditioner before being recirculated through the home.

The collector plates are periodically washed to remove the dirt. All that is necessary, according to the company, is to turn a valve which produces a spray of water over the plates.

The Raytheon home precipitator measures 54 in. high, 28 in. wide, and 27 in. deep. It weighs 300 lbs.

Only external connection is to a 115 volt, 60 cycle, electrical source. With a rating of 1,200 c.f.m., it is claimed to consume only 50 watts per hour, or less than that consumed by an average reading light bulb.

Deeper, Improved Blades



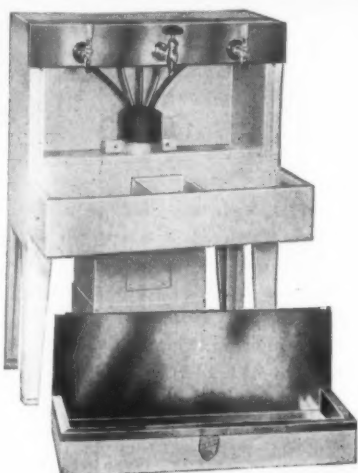
Lau 'Weldwheel' Provides Increased Volume of Air

DAYTON — Lau Blower Co. here has just announced production on a new "Weldwheel" all-welded blower wheel, said to provide a greater volume of air at higher pressures per horsepower than previous wheels.

This increased air volume is said to be the result of blades which are deeper and have better curvature and pitch, plus an increased number of blades.

Other improvements cited include a 25% reduction in weight and increased strength.

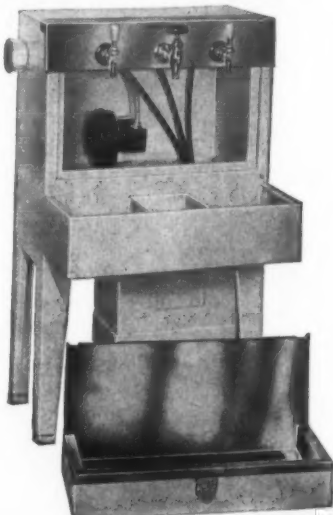
The wheels are 5, 6 1/4, and 7 1/2 in. diameters. The wheels can be made in widths down to 1 1/2 in., the manufacturer points out.



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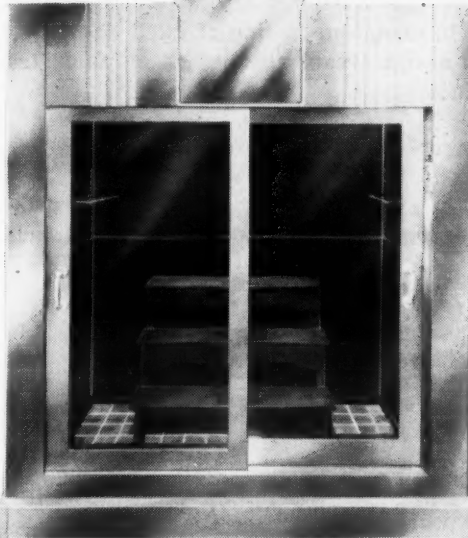


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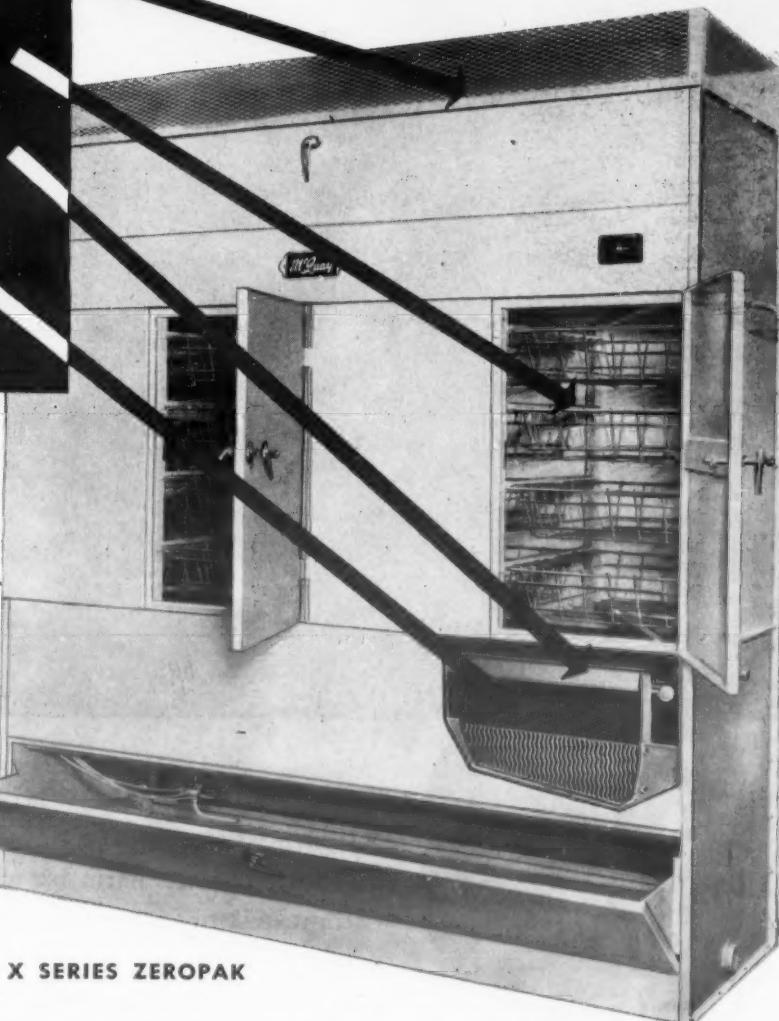
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High economy water defrost

High efficiency McQuay coil construction



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Tunnel freezing eliminates "freezer burn" because heat is uniformly removed from the entire surface of the product. Dehydration during storage is prevented by the high moisture content of the cooling air.

X SERIES ZERO PAK units incorporate exclusive hydraulically expanded McQuay coils, water defrosting, tinned wire baskets and many other features. See your refrigeration wholesaler today. McQuay, Inc., 1607 Broadway St. N. E., Minneapolis 13, Minn.

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Factors In the Design of a Compact, Serviceable 'Packaged' Conditioner

Editor's Note: B. F. Sturtevant Co. Division of Westinghouse Electric Corp. recently introduced its new line of "Unitaire" packaged air conditioners. One of the division's design engineers here describes the considerations in designing a line of such equipment, and tells how the desired design results were accomplished in producing the finished product.

By A. E. Skeats, Design Engineer, B. F. Sturtevant Co., Division of Westinghouse Electric Corp., Hyde Park, Mass.

Before the new Westinghouse "Unitaire" air conditioner was started on the drawing boards, the design engineer made plans to make this unit efficient, quiet, compact, easy to maintain, and attractive in appearance.

How this has been accomplished in actual production is what this article will describe.

Compressor Design

The efficiency is obtained by the use of a newly designed 90-degree "V" type hermetically sealed, direct-drive compressor with dynamically balanced crankshaft and rotor. The volumetric clearance and restrictions to gas flow are held to a minimum.

The condenser-receiver, which is a shell and coil type, is designed to use a minimum amount of water, and the evaporator and associated equipment is carefully matched to the rest of the system. The fan was specially designed.

To insure quiet operation, vibration eliminators are used to reduce transmission vibrations. The com-

pressor, condenser-receiver, and fan and motor assembly are all mounted on rubber. The fan shaft has rubber housed bearings, and the fan motor is resilient mounted.

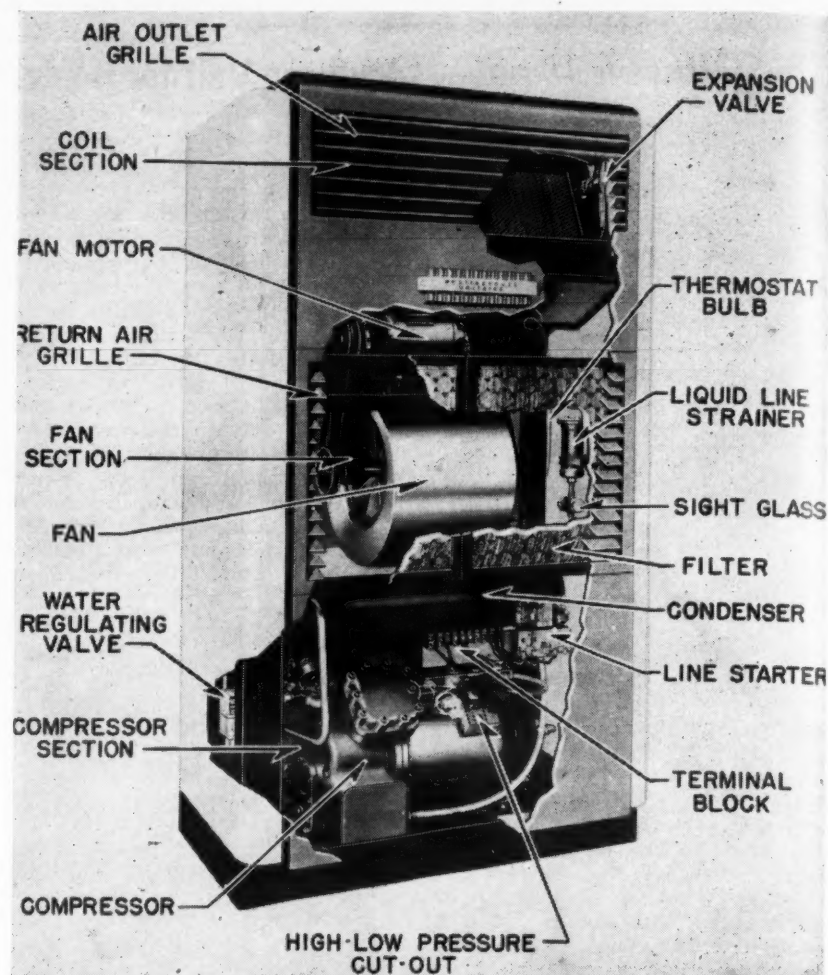
To reduce fan outlet noise, the fan outlet is connected to the cooling plenum by means of a canvas duct, and the Unitaire is a "blow through" type rather than a "draw through" type with reference to the cooling coil. The entire cabinet is lined with sound absorbing insulation.

Compactness is obtained by careful planning to make use of the space in the cabinet (see illustration).

Care was taken to make sure the unit could be serviced with ease. The entire conditioner can be serviced by the removal of front panels. The center front panel, which is the return air grille, is removed by one-quarter turn on each of four spring screw fasteners hidden from direct view, but easily accessible, between the grille louvers.

When this panel is removed, the filters can be readily replaced, and there is easy access to the fan motor,

How Components Are Placed



Above is a cutaway photograph revealing the placement of the components in the new line of Westinghouse packaged air conditioning units.

bearings, and wheel, and a check can be made of the refrigerant through the sight glass on the liquid line.

For further servicing, two screws can be removed from the lower front panel, and this provides complete access to the starter panel, compressor, condenser-receiver, high-low pressure cut out, and water regulating valve.

The expansion valve, coil, and drain pan can be serviced by removal of the front-top panel which is held in place by two screws.

If still more access is desired, the side panels may be removed.

The application engineer's interests are covered by supplying variable pitch pulleys on the fan motor and also the front-top panel is reversible to provide either forward or upward air discharge. As an accessory item, an adapter can be used to introduce outside air. This adapter may be attached to either of the side panels or rear panel.

A return air stop-off panel placed behind the return air grille provides a means for adjusting the amount of return air when outside air is introduced. Four knockouts located on each side and the rear of the base provide easy entrance for water and electrical connections.

Heating coils are provided as an accessory item. These can be ob-

tained in one and two row steam and two row hot water. These coils are installed on the entering air side of the evaporator coil and connection can be made through the side or rear panels.

Appearance is enhanced by the use of a two tone gray baked enamel and advanced cabinet design. The streamlined louvre grilles are adjustable on the outlet side. The controls are hidden behind a nameplate at a convenient height. The nameplate is spring operated to make it swing back into position, thus concealing the control dials.

Refinishing Panels

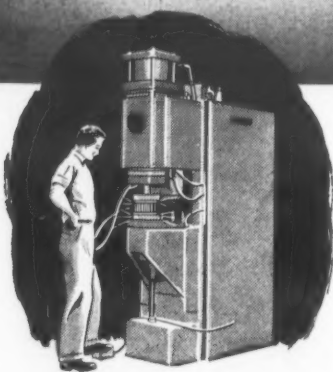
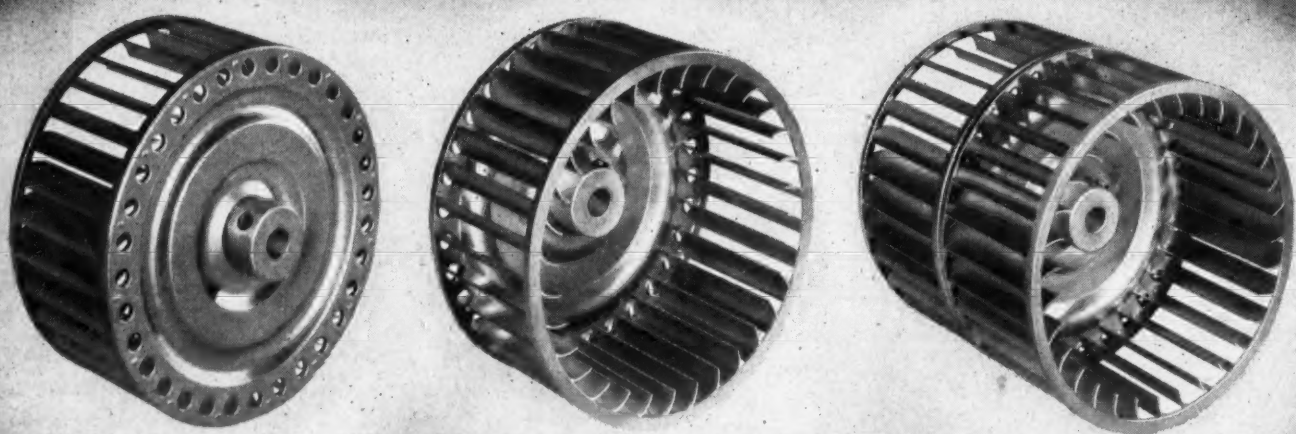
The two tone gray, which is the standard color, will blend with the surrounding fixtures. However, if a special color is desired, it is simple enough to remove the panels and have them refinished any desired color in any good metal finishing company.

In order to cover the field of "within-the-space" self-contained air conditioners, Westinghouse has three sizes with standard ratings as follows:

SU-21 Unitaire	*24,000 Cooling Units
SU-31 Unitaire	*36,000 Cooling Units
SU-51 Unitaire	*60,000 Cooling Units

*American Society of Refrigerating Engineers Standard Rating in B.t.u. per hour.

Newest development in BLOWER WHEELS for oil burner, stoker, and air conditioning applications



The New Lau "WELDWHEEL" is the result of several years of concentrated engineering to produce a better performing, competitive-priced product. Its parts are welded together by electrical control and with greatest precision possible so that the proper amount of heat and correct pressure are developed to produce a strong, sturdy wheel to fit your exacting requirements. Its better performance gives you wider range of operation and better pressure characteristics. Furnished with standard hub or with hubs adaptable to Lovejoy or Guardian couplings. Standard hub bores 1/2-inch and 5/8-inch. Wheel width (or length) 1-inch up to 4-inches in single inlet. This wheel is available for immediate delivery in 5-inch, 6 1/4-inch and 7 1/2-inch diameters.

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Muncie Firm Plans To Market Heat Pump Through Air Conditioning Contractors

By George M. Hanning

MUNCIE, Ind.—When the time comes, Muncie Gear Works intends to distribute its Marvair reverse cycle refrigeration system for home heating through air conditioning contractors, C. O. Fields, chief engineer of the company, indicated recently.

As the present design of the unit calls for heat distribution through air ducts and because the system is primarily a refrigeration unit, air conditioning contractors will be the natural ones to handle and install them, he affirmed.

The Marvair system draws natural heat from the earth by means of an enclosed circulating water system sunk into a 200 ft. well and uses that heat to warm a home during the winter. By reversing the cycle, the same system will cool the home in summer.

At the present time, Muncie is manufacturing a 3 hp. unit and intends to produce a 5 hp. unit, Mr. Fields declared.

Production to date has been hampered by difficulties in getting capacitor start, induction run motors in the sizes desired, Mr. Fields asserted.

All units so far installed, he said, have been placed in the TVA territory where the unit could have the advantage of cheap electric power. At the same time, this concentration of units aided the company in checking their operation and in quickly ironing out any bugs that developed.

Marvair is still in the pioneer

stage and there is much yet to be learned about reverse cycle heating, he averred. For one thing, Marvair engineers have found that the type of rock beneath the home to be heated has a great deal to do with the efficiency of the unit.

Limestone, because it is porous and permits a good flow of the earth's water over the pipes, is excellent, he explained. However, granite and other hard non-porous rock act as an insulator and prevent the unit from operating properly.

In cases where the rock is not suitable for the use of a 200 ft. well, several shallow wells can be dug, he said.

Though Marvair now uses a refrigeration compressor, Mr. Fields said that for maximum efficiency, the unit required a new type compressor that has different operating characteristics.

He pointed out that though Marvair now transfers the heat from the water system in the well to an air duct system for heating the house, it could just as well transfer the heat to a water system and distribute it through radiators.

At the present time, he said, Marvair costs little more to operate than other heating systems, the exact cost differing with the varying conditions the system is forced to meet. With constant improvement of the unit, however, he expects that operating costs will be reduced to compare favorably with other heating methods.

Gas Industry Readies \$2 Million To Expand Year-Round Conditioning Mkt.

NEW YORK CITY—The gas industry stands ready to spend \$2,000,000 this year to prepare for the expansion of the year-round air conditioning market that its executives expect to develop within the next 18 months, a spokesman for the American Gas Association indicated recently.

Spurred by the thought that the electric heat pump will be ready for large scale production next year, they are pushing the development of a gas-fired air conditioning system.

Toward this end, gas industry executives met at the first of a series of regional meetings recently to discuss results of field tests that subjected gas air conditioning equipment to the "most rigorous climate conditions during the past three years."

Consensus of this meeting was to

start promotion of gas air conditioning immediately, it was said.

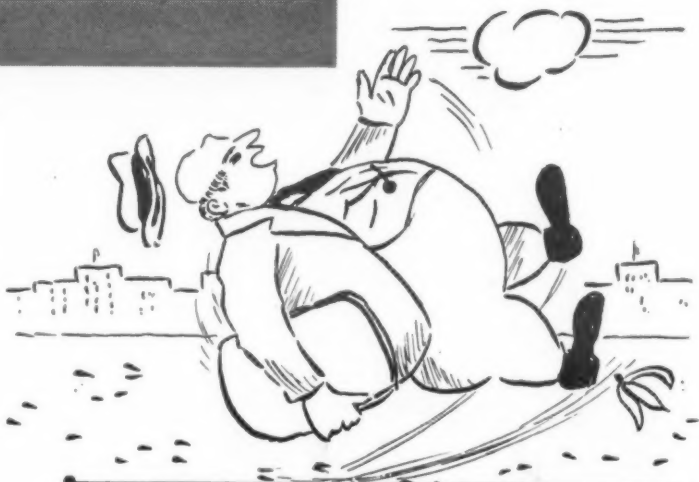
The executives noted that more than 1,200 units of gas fired, all year climate control equipment were shipped by manufacturers last year.

They believe that such equipment will help the industry to level off winter and summer peaks and valleys in the use of manufactured and mixed gas.

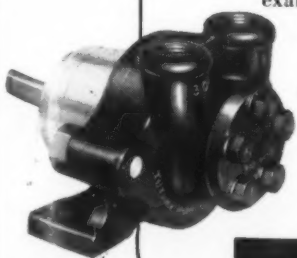
Present handicaps to the full use of year-round gas air conditioning include the restricted availability of gas and transmission facilities and the shortages of steel and tin plate which hinder expansion of the industry, gas executives declared.

The South and Southwest will see the first units installed, it was said, because of the large deposits of natural gas there.

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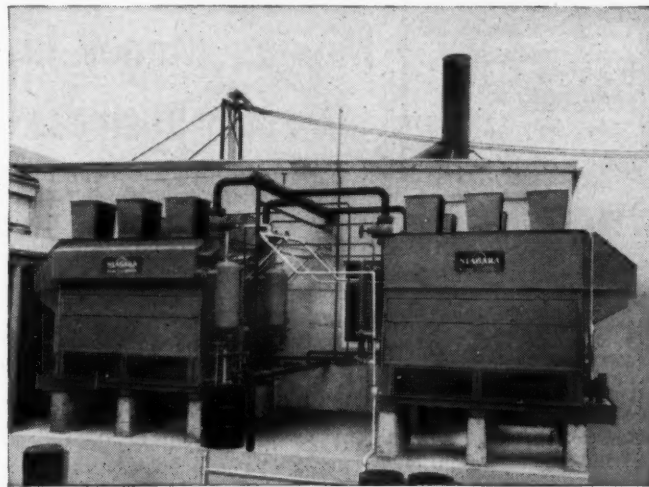


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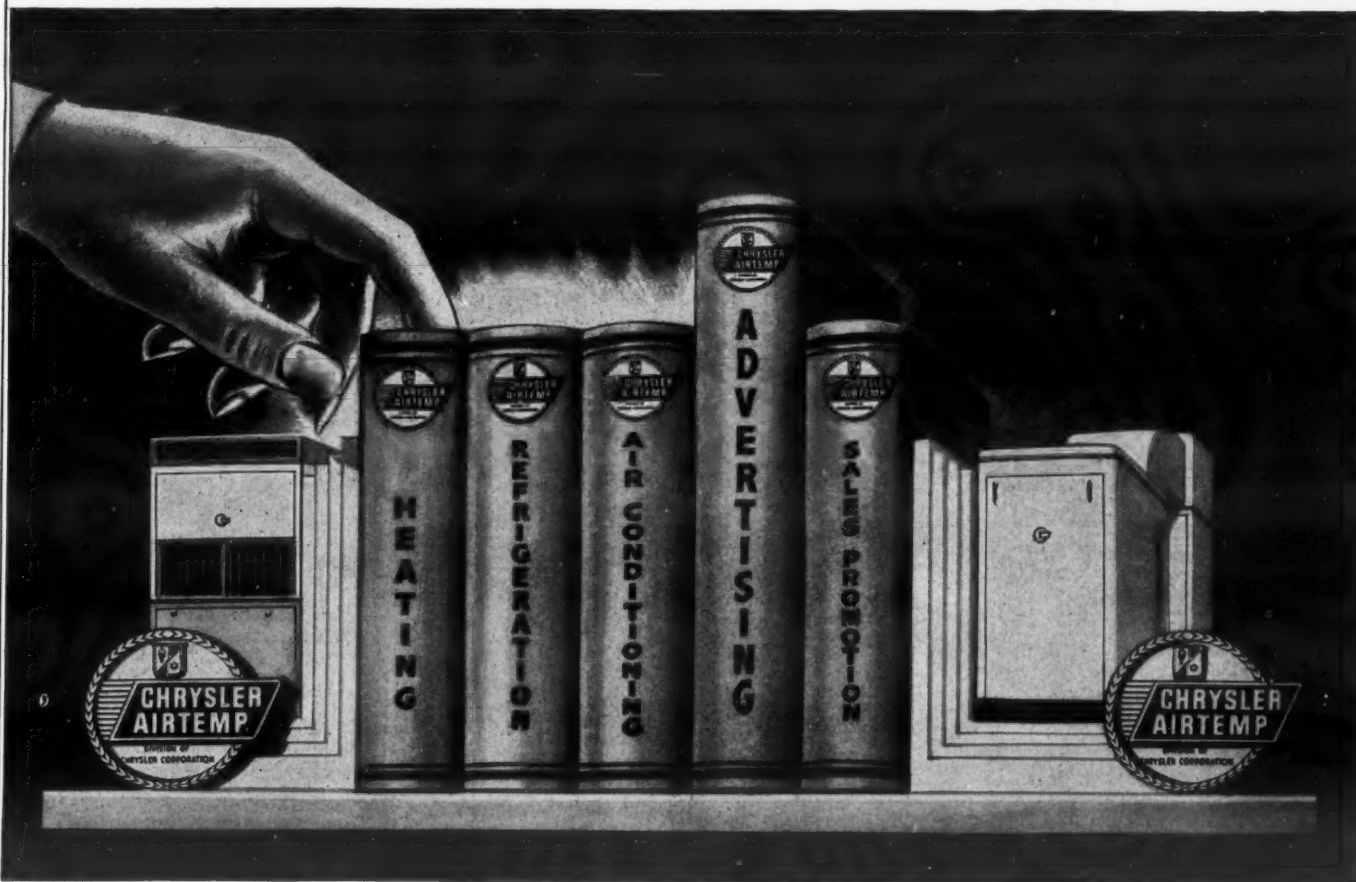
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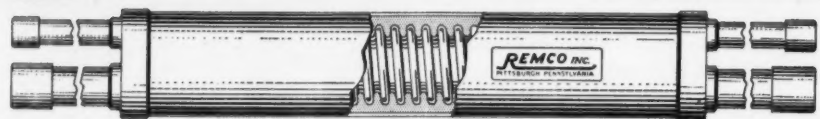
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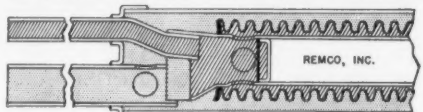
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Liquid flows inside the spiral corrugations in "prime" heat exchange relationship with the colder higher velocity suction gases which travel outside the rapid-transer "Liquid-Fin" heat exchanger element. Capacity per unit size is very high.

The industry now has sufficient test data and actual field experience on suction-liquid line heat exchangers to fully appreciate the substantial increase in system capacity and vast improvement in lowside and refrigerant control performance to be gained by their use. They now are accepted as standard components to be included in every new and existing commercial job. Keep in mind, the lower the lowside temperature, the greater the need for, and advantage of, a heat exchanger.

Straight through design of liquid and suction connections, plus 125% minimum flow areas, definitely precludes the possibility of pressure drop in either the liquid or suction circuit, even under maximum operating conditions.

Because the suction gas is on the outside, REMCO "Liquid-Fin" Heat Exchangers may be installed inside or outside of the refrigerated space.

No. 2

ASK YOUR WHOLESALE... OR WRITE

REMCO, INC. 49th Street & A.V.R.R. Pittsburgh 1, Pa.

Refrigeration Problems And Their Solution

By P. B. Reed

For Service and Installation Engineers



Manager, Refrigeration and Air Conditioning Division, Perfex Corp.

Making Money In a Service Business (2)

Gross Profit is only an accounting profit; only part of it is *real* profit, for some of the costs are still in Gross Profit. The only costs that are taken out before the Gross Profit is shown, are those costs that can be directly charged to one installation or one service call.

ANALYSIS OF TYPES OF BUSINESS

Sometimes, for purposes of analyzing costs and profits, the Gross Profits of one class of business are added together so that they can be compared with the total Gross Profit of another phase of the business. For example, the total Net Sales, Direct Costs and Gross Profits for all the domestic service calls for the month of April may be compared to the total Net Sales, Direct Costs and Gross Profits for all the commercial service calls made that month. In this way it can be determined which kind of calls pays the best.

Sometimes we get some unexpected answers to studies of that sort; we might find that a higher labor rate, more lost time, or more no-charge callbacks, result in a lower gross profit on commercial than on domestic service calls. (This is not to be interpreted to mean that domestic service pays more than commercial service, but that it *could*, and *maybe* does in *your* case.)

UNDISTRIBUTED COSTS

But there are some costs that cannot be charged directly to one service call, nor one installation; neither can a "piece" of some item of cost be directly charged to one job. But these costs must be taken out in order to arrive at a *Net Profit*.

RENT COST ON ONE CALL?

Rent is one of these costs. The rent has to be paid, but the rent for one month, one week, or even one day cannot be taken out of one service call. The monthly rent could be figured out on an hourly basis and two hour's rent could be taken out for a service call that used two hours labor. But this amount would vary with how many service calls were being made during those two hours.

Thus it would be quite a complicated process to try and break down the cost of your rent so as to evenly allot just the proportionate amount to each service call.

Besides, there are many items of indirect cost that are in the same classification as rent. Some of the most recognizable are: telephone, lights, heat, advertising, insurance, gasoline and oil for the trucks, supplies for the office and for the shop, postage, telegrams, repairs to the trucks and to the machines in the shop, lost or broken tools, licenses, and last but certainly not least, supervisory and clerical salaries, including your own salary and those of your stenographer, supervisors, stock room men, truck driver, janitor and any others whose pay must be spread over the entire business.

COSTS BILLED BY THE MONTH

These costs are not paid by, nor chargeable on, a per-job or per-hour basis, but usually on a monthly basis or on such other time basis that they can be easily convertible to a monthly, weekly or yearly basis. You can get a bill for these costs by the week, month or year or they are in the weekly or monthly payroll, and they therefore come to your attention often and are not easily overlooked.

HIDDEN COSTS

In addition to these costs that you get monthly bills for or that otherwise have to be paid at frequent periods, there are some other costs that are "hidden costs," and are easily overlooked. Nevertheless they do take some of your money and they must come out of your Gross Profit before it is a *Net Profit*.

These "hidden costs" include Depreciation, Interest on Investment, and Reserves for various purposes. They deserve more than passing comment so they will be discussed later in some detail; but for the present we will merely call them Hidden Costs.

OPERATING EXPENSES

All of these daily, weekly, monthly, yearly Indirect or Hidden Costs, that cannot be directly allocated to any one job, are the costs of running or operating the business and are, therefore, sometimes called Operating Expenses.

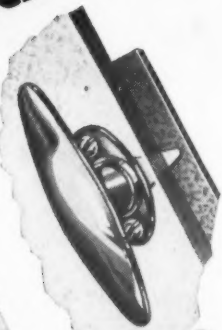
OVERHEAD

They go on, more or less the same, whether or not there are any sales. They are the overall or overhead costs and are therefore, often called Overhead.

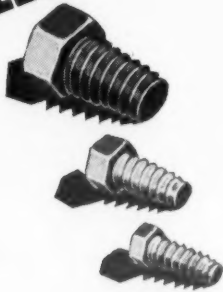
(Concluded on Page 25, Column 1)

Marlo MEANS MINIMUM MAINTENANCE ...easy-to-service

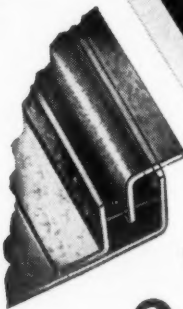
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Refrigerants

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Making Money In A Service Business

(Concluded from Page 24, Column 5)

Regardless of what we call them, they must be paid, whether there is any business coming in or not. The amount and percent of Gross Profit goes up and down in about the same proportion as the amount of business done (Net Sales), or should at least. But the percentage of Net Profit varies tremendously with the amount of business done.

EXAMPLE OF PROFIT

The following example illustrates how this works out. A service contractor did a total business last year of \$50,000 in service and installation only. He did not engage in selling equipment, other than parts and material used in service and installation, except for an occasional condensing unit or blower coil for replacement purposes, such sales being too few to

warrant keeping a separate merchandising account for them.

For the year, his Direct Costs (direct labor, material, and other costs that could be directly charged to the jobs), amounted to \$32,000. Therefore his Gross Profit was \$18,000 or 36% ($18,000 \div 50,000$).

His Overhead for the year was \$16,000. This consisted of \$5,000 which he took out for his own salary and \$11,000 for rent, an office girl, telephone, heat, insurance, bad debts, depreciation, interest on investment, reserves and other miscellaneous Operating Expenses.

NET PROFIT \$2,000

Taking the Overhead of \$16,000 out of the Gross Profit of \$18,000 left \$2,000 as a Net Profit. This was 4% of \$50,000, his Net Sales, so he made a Net Profit of 4%. This is too small. A Net Profit should be somewhere between 5 and 10%.

HIS PERSONAL INCOME \$7,000

However, it made a total personal income for him of \$7,000 which he figured was about as much or perhaps a little more than he could have made on a salary working for someone else. He was his "own boss," although he had worked harder, at longer hours, and had more worries than if he had been working for someone else.

Moreover, he had put some of the Gross Profit back into the business in the form of some new equipment and heavy Reserves for expansion, purchase of additional shop equipment, tools, buildings, and a stock of merchandise. In that way, he was building up his own net worth by building up the assets of his company, for although it was incorporated, he owned 97% of the stock.

BUILDING UP A BUSINESS

If, every year, he could build up the net worth of his company, increase its volume of business, at the same time take an adequate living out of it and still make even a small Net Profit, he could later retire and let someone else carry on the business, which, by that time would do a large enough volume that its Net Profit alone, without a salary to him, would be sufficient to keep him in his old age and assure his widow a comfortable income and his children an inheritance.

If they continued to operate the company in a businesslike manner it would be self-perpetuating and would provide them with a comfortable income. That has been the history of many, old, successful businesses built up, year by year by Reinvested Profit.

(Continued Next Week)

Dehlendorf Gets District Sales Post with Jahco

CLEVELAND—Robert O. Dehlendorf, for the past two years eastern district manager of the Emerson Electric Mfg. Co., has joined the sales staff of Jack & Heintz Precision Industries, Inc., as eastern district sales manager of the Electric Motor Division, Edward R. Legg, vice president has announced.



Mr. Dehlendorf was associated with Emerson Electric for 23 years, the first 15 in various engineering capacities, the final eight as a key sales executive. During the war he served as assistant to the company president, charged primarily with administration of U. S. Navy contracts for Emerson Turret Division. In 1945 he succeeded to the district managerial position, with headquarters in New York City.

Operating out of New York City, Mr. Dehlendorf will cover a Jack & Heintz sales territory which embraces the entire eastern seaboard.

2 Open Ventura Refrigeration

VENTURA, Calif.—Ventura Refrigeration Sales & Service Co. is the firm name under which Clarence W. Harvey and Augusta L. Harvey have published a certificate that they are conducting business here.

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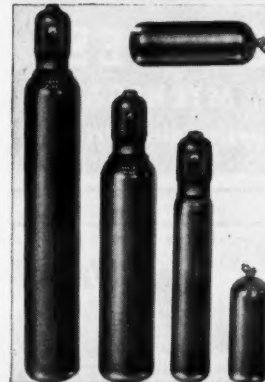


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When the flare is drawn against this groove the copper tubing is extruded into the groove making a tight, self-sealing joint. Here is the joint that remains leakproof even though the face of the seat may be nicked or marred. This extra seal of safety is a plus feature that costs no more. Included in all sizes $\frac{3}{8}$ " and larger.

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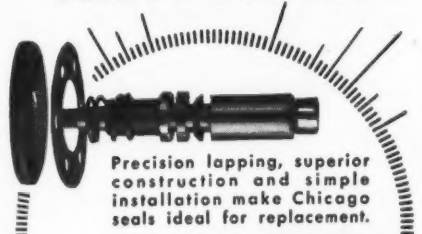
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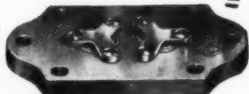


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HARRY H. SPEAR
REFRIGERATION SERVICE ENGINEER

November 28, 1946

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Attention: Mr. L. V. Gardner

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Every new job has Thawzone applied directly into the receiver and strainer, as I have yet to see any such equipment in which every piece is absolutely dry. On service jobs we inject Thawzone into both the strainer and crankcase. I have never had any adverse conditions arise in any system from the use of Thawzone. We cannot praise Thawzone enough and you may call on us for a reference any time.

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Shippers Using Refrigerated Trucks May Find That 'What They Don't Know Will Hurt Them'

Director of Large Western Fleet Cites Certain Shortcomings & Limitations of Present Reefers

By C. Dale Mericle

SALT LAKE CITY—"There is a growing demand for refrigerated truck transport, but better temperature performance in general is needed," contends R. F. Allyne, director of refrigeration for Pacific Intermountain Express.

(P-I-E operates a vast network of

truck routes between the Pacific coast and Chicago, and recently brought out a new refrigerated truck for use on its own lines, as described in the April 28 issue of the NEWS.)

"Generally speaking, inside temperatures of refrigerated trucks are not low enough, and there is often uneven distribution of temperatures inside a truck or trailer body," says Mr. Allyne.

He urges the formulation of performance and test standards on a national basis and suggests that "perhaps it is not premature to consider a testing laboratory available to all."

With regard to temperatures, he declares, "Certainly the minimum standard of performance is to maintain the pre-cooled temperature, which in the case of frozen foods normally means 0° to 4° F.

Need Minimum Fluctuations

"Some truck operators are content with merely retarding the temperature rise, and use the absence of cargo damage claims as a gauge for acceptable performance. That is not good enough, inasmuch as frozen foods should be held at an even temperature with minimum fluctuations," says Mr. Allyne.

"Since it requires about twice as much refrigeration to meet the minimum standards for frozen foods suggested above as is required for high temperature perishables (35° to 40°) in an 80° ambient, it is true that some equipment is capable of doing a satisfactory job with the high temperature group, but they should not attempt the frozen foods."

"Doing the job right is a matter of balance between insulation used and the capacity of the refrigerating mechanism in relation to the ambient temperature and the temperature desired inside. Each operator should know the performance capabilities of his equipment. This requires research," comments Mr. Allyne.

"Undoubtedly many truck owners would be surprised if they knew the differential between the coldest and warmest locations in their equipment when it is loaded. It does not follow that a piece of equipment providing approximately the same temperatures at all points inside when empty will do the same thing when loaded because the air flow characteristics are entirely different."

Tests Air Distribution

Tests to check this were conducted by Mr. Allyne, who says that with an empty trailer operated under maximum refrigeration results were characterized by "very uniform temperatures at all locations."

To simulate loaded conditions in the air flow experiments, more than a thousand empty fiber-board boxes were then stacked in the trailer and the test repeated under identical ambient conditions.

"Results indicated that the same uniformity did not exist, and it was a rather simple matter to make alteration of the interior design (without altering refrigerating unit or capacity) to effect the desired improvement of obtaining approximately the same temperatures at all locations," states Mr. Allyne.

The research required for both



Improvements are needed in refrigerated trucks, but shippers must also learn how to use them, says R. F. Allyne, director of refrigeration for Pacific Intermountain Express.

temperature and air distribution control necessitates special instruments, facilities, and knowledge which most truckers do not possess, he avers.

"Here is where a national association could provide a service for the benefit of the refrigerated trucking industry and shippers. In the early days of the household refrigerator, a standard test procedure was set up by Nema. The same principle could be applied to refrigerated trucks with a grading to indicate their capacities, which could be publicized for the shipper of perishables," he suggests.

Facilities for rendering this service should include refrigerated test rooms also for determining truck heating equipment requirements, according to Mr. Allyne.

"Considerable educational work is likewise needed among truck personnel to provide proper handling of perishables and guard against temperature losses. And the shippers themselves could use a bit of education to their advantage."

Proper Handling Essential

"During test runs I've seen shippers wash off 30-lb. tins of frozen fruits with fire hose—cans which came out of a cold room at -12° F., but which were well above 0° when finally loaded on these refrigerated trailers," he comments.

"Leaving pallets of frozen foods in the sun on the loading platform during lunch hour is another example from the 'Chamber of Perishable Horrors,'" he adds. "Truck personnel, educated to watch for such common errors, should close doors and start refrigerating units during lunch periods and other delays until loading or unloading can be resumed."

"Shipper and trucker or consignees should act in common interest to assure prompt and proper handling of perishables. Shippers should be acquainted with the performance capabilities of good refrigerated trucks, which maintain a pre-cooled cargo at its loading temperatures and perhaps lower the temperature a little."

"Shippers must understand that the temperature at destination is dependent on the temperature of the commodity at loading. One shipper provides meat at anywhere from 37° to 70° but wants it all at the same temperature upon arrival. They must understand that a reefer is no substitute for a chill room which can reduce the temperature quickly."

"When placing 60° cargo in a reefer, shippers cannot expect 0° air temperature merely by setting the thermostat at 0°."

"Along these lines," continues Mr. Allyne, "it has been found very

(Concluded on next page)

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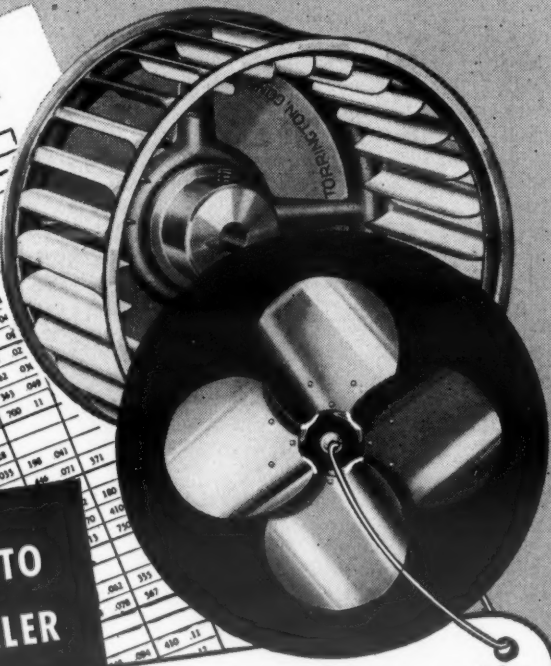
World's Largest Manufacturers of REFRIGERATION CONTROLS

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Under test conditions of NAFM Code, Plate V,
using housing dimensions shown on page 8



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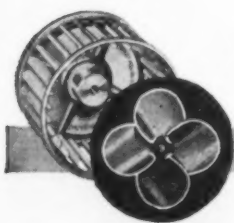
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Philadelphia, Penna. Chattanooga, Tenn.

Truck Substitutes for Cold Storage Warehouse



Fitted with a Thermo King unit, this American Bantam trailer served as a mobile cold storage warehouse for Murdock Distributing Co. of East St. Louis, Ill., when the firm's regular beer warehouse burned down.

Space Is Limited --

(Concluded from preceding page)
helpful to cite a few hypothetical cases as follows:

"Cities 'A' and 'B' are 1,000 miles apart. Assume an ambient of 75° F. and a thermostat set at 0°. If our reefer were sent from 'A' to 'B' empty, the air inside would be automatically maintained at 0°. If the reefer were loaded with frozen foods which had been pre-cooled to only 20° F., the air inside might be 17° to 20°. If fresh meat pre-cooled to 35° were loaded, the air inside might be 28° to 31°. If meat pre-cooled to only 60° were

loaded, the air inside might be 50° to 54°.

"The reason why even the best equipment cannot refrigerate to a greater extent is due to the weight and space limitations of the refrigerating units," he says.

"Truck operators cannot afford to reduce the payload by increasing insulation beyond economically practical limits, but they would welcome a compressor of large capacity which would weigh less. Compressors commonly used now are built for static installations where weight and space are not limiting factors.

"There is a big market in the refrigerated truck industry for a compressor lighter and smaller than those available in the past," believes Mr. Allyne.

Light-Colored Paint or Metal Finish Can Improve Performance of Reefer Bodies

DENVER — Overall thermal efficiency of refrigerated truck bodies can be increased to a considerable degree by providing a bright metal finish or light-colored paint to reflect heat rays, asserts Verne M. Drew, research director, Fruehauf Trailer Co.

Speaking before the annual spring meeting of the American Trucking Association held here recently, Mr. Drew pointed out to the truck operators that several practical considerations are important in improving operation of refrigerated trucks through better performance of the insulated truck bodies.

Final variations between theoretical and actual performance of refrigerator truck bodies may often exceed 50%, he said, but "there are numerous ways in which overall body thermal efficiency can be increased.

"For example, all materials have a definite ratio of resistance to heat flow by radiation; bright surfaces reflect heat rays that a dull or dark surface would absorb.

"Consequently, if the outer body panels of a commercial body are of highly polished metals such as aluminum or stainless steel and are left unpainted, the thermal efficiency will be increased to a considerable degree. It is believed that as high as 10% advantage can be obtained under certain conditions, particularly in sunny climates. The same holds true on interior panel surfaces but to a somewhat lesser degree.

"Therefore, if you must paint the

outer surface of a refrigerated body as a means of metal protection, by all means paint it a light color, white preferably, or a cream yellow."

Importance of keeping the insulation dry was also stressed by Mr. Drew, who told the truck operators that "since it is impossible in current practice to construct a hermetically sealed chamber between inner and outer body walls, condensation due to humidity and temperature differentials is certain to collect on interior body walls and more particularly on the inner wall. It is therefore vitally important that suitable drainage be provided."

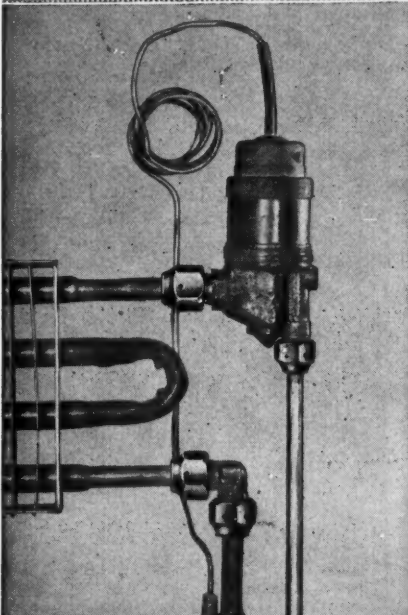
"Weep holes" in single walls of 3-in. thickness or less should be provided to allow drainage, he asserts, while truck bodies with double-wall construction should have baffle plates to direct inner wall condensation into the body interior.

Although interiors of refrigerated truck bodies may be finished in wood or metal, Mr. Drew suggests that the use of wood be limited to relatively dry loads.

Where "excessively wet" loads are handled or there must be pre-loading cleansing with steam or hot water, "there is no substitute for the fully metallized interior," he declared.

Several methods of metallizing interiors were suggested by Mr. Drew, ranging from thin metal sheets applied over plywood to formed or corrugated steel or aluminum sheets strong enough to eliminate additional backing.

STA-TITE THE REFRIGERATION FLARE NUT which cannot Creep or Work loose



Moisture will work its way along the threads, to fill the space between the fitting and the inside of the flare nut. Confined in this space, the water, in its attempt to freeze during the operating cycle, develops a tremendous pressure—16,400 p.s.i. at 20° F. Something has to give at such high pressures . . . (1) the nut may stretch, (2) the male fitting may collapse, (3) the copper tube flare may extrude . . . any one of which will allow the flare nut to loosen. You know the rest—moisture in the system and/or loss of refrigerant. A condition which has long baffled the refrigeration industry.

NOW—Superior engineers have found a positive cure—the new "STA-TITE" Flare Nut. By simply providing relief openings in otherwise standard flare nuts, the possibility of pressure being created is entirely eliminated . . . the flare nut stays tight!

Thousands of "STA-TITE" Flare Nuts already in service have yet to show a single failure. Moisture trouble, costly and annoying leaks, because of so-called "creeping" flare nuts, have been eliminated completely.

Get "STA-TITE" Flare Nuts from your jobber. Use them on all connections which are subject to frequent or occasional frosting and defrosting. Banish "creeping" and leaks forever!

"STA-TITE" is another Superior contribution to better refrigeration!

*U.S. Patent 2,323,099

NO. 134



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contents

Refrigeration

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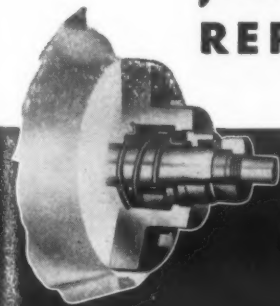
The new KOLD-HOLD Catalog is a book of benefits and savings. It contains refrigeration know-how . . . information relative to the better storage and transportation of perishable products at lower costs. This catalog shows that Kold-Hold Serpentine Plate Type Evaporators have no equal in efficiency and dependability for locker plant space cooling, for shelves and stands in sharp-freezing or as cabinet liners, shelves or dividers. It explains how "Hold-Over" Plate Type Evaporators maintain the temperature of delivery bodies at the uniform level necessary in the successful transportation of fresh meat, ice cream, frozen foods and other perishables.

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Servicing Truck Refrigeration Units

Editor's Note: While there are a great number of truck refrigeration installations employing "Freon-12" or methyl chloride as the refrigerant, there are numerous existing systems using ammonia. The principles of refrigeration are the same with all of these gases, but there are some differences in their practical application as is pointed out in this instalment, prepared with the assistance of Kold-Hold Mfg. Co. of Lansing, Mich.

Instalment No. 40

Truck Plate Systems Using Ammonia

The aforementioned details on methods of estimating plate requirements for a truck apply to both low pressure refrigerants such as "Freon-12" and methyl chloride, and ammonia systems. There are certain

other differences, however, between truck plate systems using ammonia and those operating on low pressure refrigerants.

Steel tubing or black iron pipe must be used for ammonia lines. In each run of ammonia pipe between truck plates or between the plates and the make-and-break valves, it is

Typical Ammonia Plant Hookup for Trucks

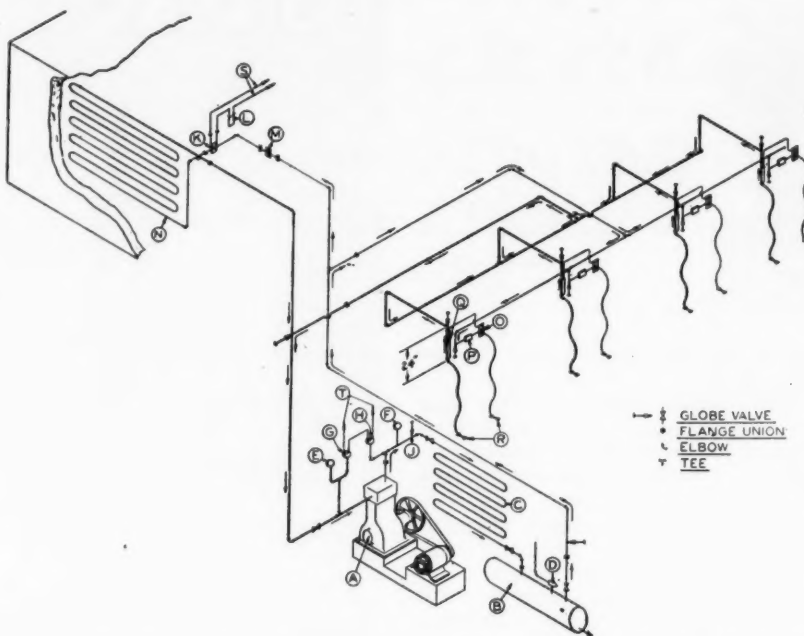


Fig. 18—This is a typical ammonia plant hookup for a truck refrigeration system using plates. Note that the main system supplies refrigeration for the cooler room indicated in the upper right.

advisable to install a screw-type pipe union. This union will permit servicing of the system and will eliminate the strain on the pipe.

Ideally, the run of pipe between plates should be equal to the length of the plate, and the pipe should change direction at least twice to minimize strains due to contraction and expansion. This usually can be arranged by mounting plates so that fittings are at alternate sides of the truck body.

The suction and liquid header mains may be located in a trench underneath the floor which is accessible through manholes or trap door covers.

Another method is to install the mains under the projecting edge of a loading dock. Overhead mounting along a wall or through the center of the garage where the lines will be accessible from a catwalk is frequently used.

Ordinarily it is most convenient to install the liquid and suction line headers adjacent to one another, and if possible they should be so mounted that the standard 6 ft. length of flexible line will reach the make-and-break valves on the truck.

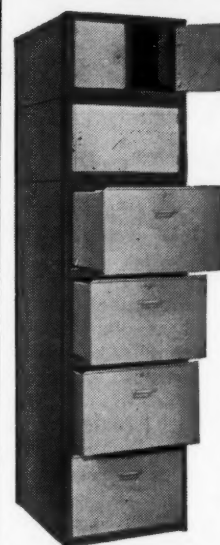
In all installations the suction line from each individual truck station must enter the suction header main through an inverted trap of not less than 18 in. and preferably 24 in. This is necessary to prevent the flooding of one truck from affecting the operation of another truck connected to the same suction line.

Arrangement of Lines In Plant

Whether one truck or a fleet is to be refrigerated by connection to an already existing large plant system or by connection to an ammonia condensing unit installed specifically for that purpose, the arrangement of the plant refrigerant lines is the same. The general design of the plant lines may be observed in Fig. 18.

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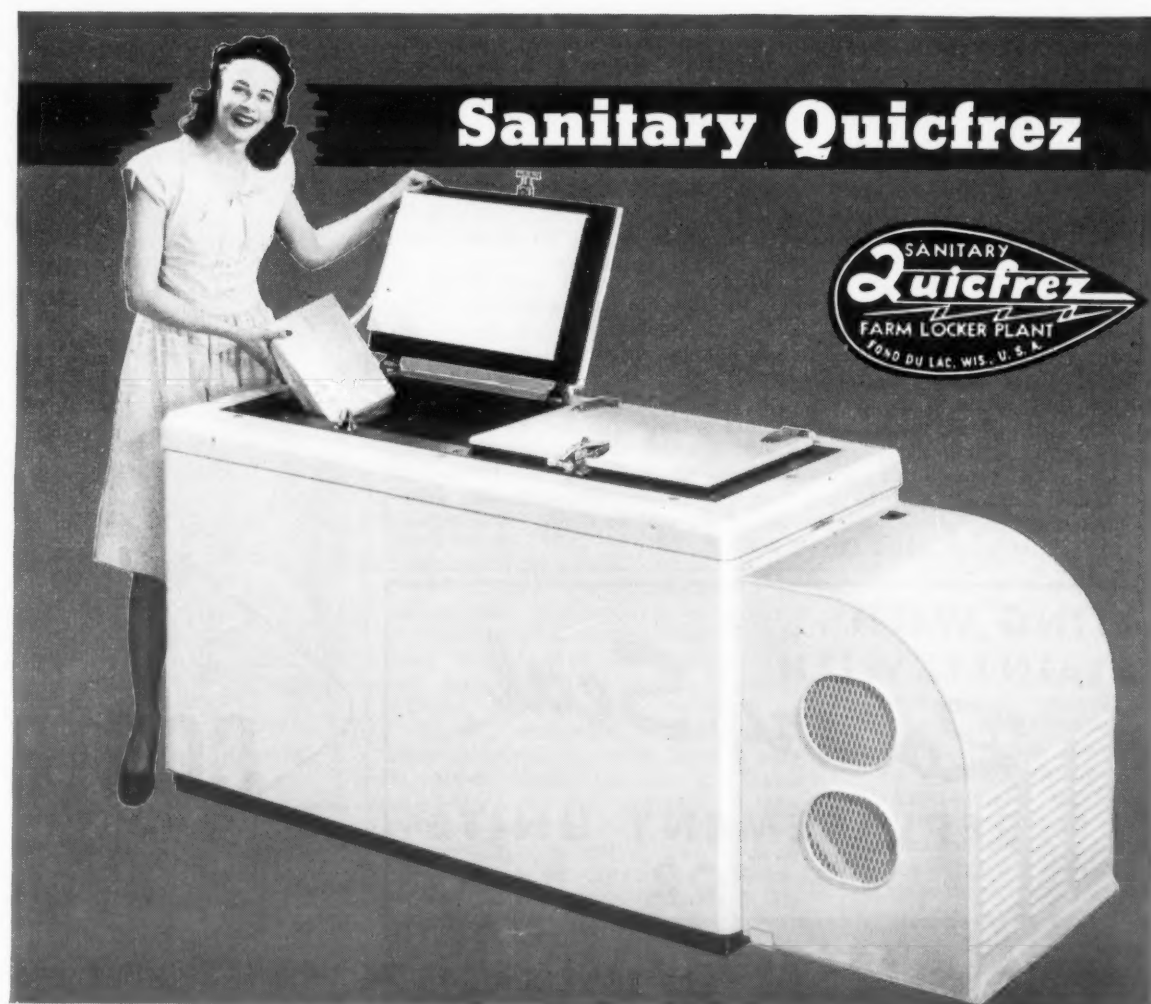
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Everything about the "QUICFREZ" Farm Locker Plant is engineered and built for years of dependable service. Thousands in daily operation since 1939.

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SANITARY REFRIGERATOR COMPANY
Fond du Lac Manufacturers Wisconsin

Ice Refrigerators for more than 40 years — Quicfrez Farm Lockers Since 1939

McQuigg Back In Detroit For Kelvinator Agency Dollar Sales Rise 25% Over '46 for Wholesalers

DETROIT—John L. McQuigg, vice president of Geyer, Newell & Ganger, is moving to Detroit as manager of the company's office in line with its expansion program in that city, B. B. Geyer, president, announced.

McQuigg will continue as agency group director supervising the Nash, Kelvinator, and Leonard refrigerator accounts. He has been located in the agency's New York office for several months since his discharge from the Army. He will direct the development of the company's business here.

Adams Refrigeration Formed In Pasadena by A. A. Ronken

PASADENA, Calif.—Adams Refrigeration is the firm name under which Arthur A. Ronken has published a certificate that he is conducting business at 2302 East Walnut St., Pasadena.

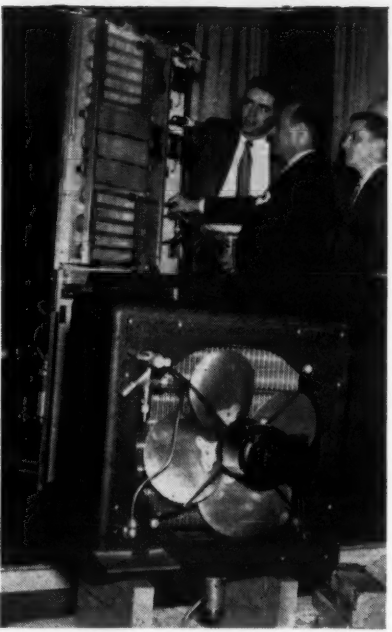
WASHINGTON, D. C.—A 25% rise over the first five months of last year is shown in the Bureau of Census five-month report of dollar sales for the wholesale trade.

Although May sales reflected little change over the month previous, they were up 19% over May, 1946. Electrical goods led the way for May with 112% boost in dollar volume as compared with the same month last year.

April credits climbed 49% above the level of April, 1946, but only 2% over the figure reached by April 1, 1947, the report disclosed.

As for inventories during May, they surged 64% over those in May of last year but showed no great change from April levels. In general, however, the Census report indicated that despite a steady two-year increase, the number of day's supply of merchandise on hand is still under prewar margin.

'See Through' Showing



Demonstrations of valve action with its glass evaporator were featured when Tenney Engineering, Inc. put on a show for 500 servicemen from the Newark area.

Tenney Shows New Line To 500 Servicemen

NEWARK, N. J.—About 500 refrigeration servicemen from the Newark metropolitan area were recently given a verbal preview of new Tenney products and a demonstration of the Tenney thermostatic expansion valve using the company's glass evaporator in the Continental auditorium here, Tenney Engineering, Inc. has announced.

Bill Wyrough demonstrated the glass evaporator unit and Tenney valves; Tom Warren, manager of the refrigeration division, discussed the development of new products; Sid Shapiro exhibited and described various company products; and Monroe Seligman, Tenney president, gave a welcoming address.

Dept. Stores Continue Downward Sales Trend; Still over '46 Level

WASHINGTON, D. C.—Maintaining a level 2% above the corresponding week last year, national department store sales for the week of June 28 continued a slight downward trend that has been operative since the first of June.

As reported by the Federal Reserve System, the increases for previous weeks are as follows: week of June 21: 3%; week of June 14: 6%; and week of June 7: 7%.

Those areas showing gains in department store sales for the week of June 28 are: Boston 8%; Chicago 6%; Kansas City 5%; Philadelphia 3%; Cleveland 2%; St. Louis 2%; and New York 1%.

A New York Times survey of monthly sales in 12 local department stores reflected a 5% rise over the same month a year ago. Even this increase, except for a decline in April is the smallest reported since the first of the year, the Times said. Major electrical appliances were again among the items showing sharp gains. Largest increase in sales among New York stores was shown by a store that stresses popular-price merchandise.

Both the Dallas and San Francisco districts reported sales decreases for the week of June 28, according to the Federal Reserve. Dallas sales dropped 4% and those in San Francisco 2%.

Nibcoloy Fittings Featured In New Nibco Catalog 901

ELKHART, Ind.—With an emphasis on the economy of using Nibcoloy steel and nickel alloy fittings in industrial piping, the Northern Indiana Brass Co. here has recently released its Catalog Number 901.

Included in the new catalog are illustrations of three methods recommended to facilitate the joining of the fittings to produce smooth inner walls, which permit an undisturbed flow of liquid.

Roughing-in dimensions and prices for the series of iconel, monel, nickel, and stainless steel 304, 347, and 316 fittings from 1/4 to 4 in. o.d. are listed, the company explains.

'Freon' Offerings --

(Concluded from Page 1, Column 5) admitted being approached with a proposition for redistilling the ingredients in Aerosol bombs.

The Aerosol "bug bomb" was developed for the armed services during the recent war as a means of providing protection against disease carrying insects. It contained a mixture of sesame oil, prethum, and "Freon," the latter being used as a diffusing agent.

From available information, it appears that some 3,500,000 of these "bug bombs" were offered as War surplus. A certain percentage of this surplus has not been sold, apparently, and this would lead to the assumption that the outfits offering the "Freon" believed that they had a source of supply which they could tap at any time. It is possibly significant that some of the offers specified a delay of a couple of weeks in filling the order.

Salesman Union Aims Hit by Gene Flack

NEW YORK CITY—Hitting particularly at the seniority and union approval of sales meetings and advertising campaign factors of unionism for salesmen, Gene Flack, president of the National Federation of Sales Executives, asserted that working standards set for the production worker cannot be used for the pattern for unions in the sales field.

Mr. Flack pointed out in his recent address before the New York Sales Executives Club that where contracts of this nature had been entered into, the companies involved lost their best salesmen.

"Every salesman keeps 33 men busy on the production line," the speaker pointed out, "and labor leaders must be impressed that it is to their best interest to work with management in keeping the sales force working at its best potential."

ANNOUNCING

Classes in, THERMODYNAMICS and ADVANCED AIR CONDITIONING are to start on a part time basis and will meet Tuesday and Thursday evenings starting July 8th, 1947. Full time classes will start August 18, 1947. The course will cover fundamental thermodynamics, power generation, heating, refrigeration, and all phases of air conditioning. Prospective students should be high school graduates, basic refrigeration or air conditioning school graduates, or have experience in refrigeration, heating, or air conditioning. Write, or call between 9 A.M. and 5 P.M. daily, for information.

GEORGE H. CLARK, Director,

DETROIT AIR CONDITIONING INSTITUTE
4125 Grand River Avenue, Detroit 8, Michigan. Te. 3-2961.

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**DOUBLE DUTY
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—with extra large cold storage space and convenient, sliding service doors.

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1/3 more than average cases



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*Double duty coils in display and storage areas provide ample, safe cooling. Brilliantly illuminated by full length fluorescent lighting. *Priced right because of our large manufacturing facilities.

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says THE LEHIGH TEAM

2 NEW sizes now available, 1 1/2, 2 h.p.

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**BLU-COLD HEAVY-DUTY
CONDENSING UNITS**

1/3 • 1/2 • 3/4 • 1 • 1-1/2 h.p.
Complete Line to include 1/4 to 5 h.p.

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Lehigh Mfg. Co.
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COMPRESSOR VALVES, ANGLE VALVES,
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THAT
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CHARGED
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—the label that is your guarantee of
maximum performance and satisfaction.
Your jobber stocks it—for refilling and
in factory charged dryers.



Distributors Refrigeration—Heating Parts &
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All Available
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COOLERS



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20 years of water cooler
leadership.

THE EBCO MFG. CO.
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Columbus 16, Ohio

REFRIGERATING PLANTS

3 York 5-ton Freon plants, Marline
type A.C., mfg. for the "Shangri-
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New, in excellent condition, com-
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coils and all necessary equipment
for three individual plants.

(included 1800 lbs. Freon Gas)

NATIONAL ENTERPRISES
105 N. Eutaw St., Baltimore, Md.

NERA Adds Seven Chapters To Roster, Simpson Says

WASHINGTON, D. C.—Seven new
chapters, located in Ohio, Wisconsin,
and Arizona, were added to the Na-
tional Electrical Retailers Associa-
tion's local chapter roster the end
of June, according to C. C. Simpson,
managing director. This brings the
chapter total to 18, he added, not
counting the already established local
associations which are now affiliating
themselves with Nera.

Two of the seven new chapters are
located in Ohio, and were organized
under the direction of State Chairman
Verne Beard, Beard Electric Shop,
Newark, and John Nusskern, Nera
field director. Local chairman of the
Perry County chapter is W. R. Conaway
of Perry Hardware Co.,
New Lexington. George Cotterman
of Cotterman's Maytag Appliances,
Newark, is local chairman of the
Licking County chapter.

In Wisconsin, Division Chairman
Wendal Lewis of Klode Furniture
Co., Milwaukee, and Nera Field Director
Norman Brahmstedt, report the
forming of a new Washington County
chapter, headed by Local Chairman
James Larson, Ross Appliance Co.,
West Bend.

Elnor J. Weinheimer, western division
regional director for Nera, spent
three weeks of June in Arizona, and
organized local chapters in Phoenix,
Prescott, Tucson, and Globe-Miami-
Superior, according to Managing Di-
rector Simpson.

The Phoenix chapter is headed by
Pat O'Hara of Ace Lance & O'Hara
Refrigeration Co. A. D. Fee of Pres-
cott Appliance Co. is chairman of the
Prescott chapter. Cecil E. Gaver of
Electric Service Co. directs the
Tucson chapter, and James R. Eager
of Globe Radio & Appliance Co. will
head the Globe-Miami-Superior chap-
ter.

Perfecold Co. Increases Sales Force on Coast

OAKLAND, Calif.—Three sales
representatives have been added to
the sales force of the Perfecold
Refrigeration Co. of Oakland, it was
announced recently by Marvin L.
Dahl, manager of the company.

The new salesmen are Frank Har-
rington, covering the San Leandro-
Hayward area; "Scot" Gould, Greater
Oakland and East Oakland area; and
"Johnny" Welch, the Berkeley, El
Cerrito, and Richmond area.

Pickering Heads Sales Training And Promotion at Danforth

PITTSBURGH—Danforth Co. an-
nounces that Thomas E. Pickering,
formerly dealer sales supervisor, has
been named sales training and pro-
motion manager. P. B. Grosscup
assumes Mr. Pickering's former posi-
tion.

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" \$2.50
per insertion. Limit 50 words.
RATES for all other classifications \$5.00
per insertion. Limit 50 words.

POSITIONS WANTED

AM PRESENTLY employed management
status wholesale distributor major appli-
ances. Desirous of change in sales or
management capacity. Have extensive
experience all phases distribution field.
BOX 2403, Air Conditioning & Refrigeration
News.

POSITIONS AVAILABLE

WANTED: FACTORY representative to
establish dealers and distributors in the
State of Indiana for an old established
Eastern manufacturer of farm milk
coolers, farm freezers, and commercial
refrigeration products. Excellent poten-
tial earning possibilities. Reply to BOX
2383, Air Conditioning & Refrigeration
News.

REFRIGERATION ENGINEER wanted by
established eastern manufacturer of frac-
tional horsepower hermetics; must be
familiar with compressor design and ap-
plication to appliances. BOX 2402 Air
Conditioning & Refrigeration News.

WANTED: SERVICE manager, capable
of organizing and supervising installation
and servicemen in distributorship han-
dling air conditioning and heating. Com-
mercial and domestic refrigeration and
appliances. Top pay and permanent con-
nection in Southern climate. Send photo
with data on education, experience, present
connection and references to BOX
2413, Air Conditioning & Refrigeration
News.

WANTED: EXPERIENCED salesmen to
represent large manufacturer in com-
mercial refrigeration and air-conditioning
field, headquarters in Kansas City, Mis-
souri, St. Louis, Missouri, and Phila-
delphia, Pennsylvania. Salary, expenses
and incentive basis. Give full particulars
when answering. BOX 2417 Air Con-
ditioning & Refrigeration News.

EQUIPMENT FOR SALE

MOTORS AND condensing units—avail-
able at once—1/4-1/2-3/4-1 HP Universal con-
densing units with or without motors.
Special—six hole ice-cream cabinets with
1/4 hp. Copeland units less motors \$225.
Also beverage coolers, beer equipment,
stainless steel reach-in freezers. ALBROD
CORP., 319 West 48th St., New York
City 19, CI 6-9100.

ONE NIAGARA #2520 evaporative Aero
condenser—\$928.88. One Niagara #25x150
Duo-Pass Aero condenser—\$841.85. Both
units are new in factory crates. ALLIED
REFRIGERATION CORP., 1635 E. 55th
Street, Cleveland 3, Ohio.

U. S. Air—air conditioning equipment—
RK 7 1/2 A—completely self-contained air
conditioner. Price each \$1,536.50. U. S.
Air single and dual blowers 10 1/2" to 16".
McQuay air conditioning coils with 3 ton
Also multi-outlet expansion valves, price
each \$85.00. In quantities of 3—\$75.00
each. ARCTICAIRE, 4128-32 Millcreek
Parkway, Kansas City, Missouri. Tel
Westport 2729.

CONDENSING UNITS: 20-25-30 HP com-
plete with motors: Acme J-300, J-500,
J-750, J-1000 shell and tube condensers:
Acme Model 200—10 ton and Model 490—
30 ton evaporative condensers. Immediate
delivery. ARCTICAIRE, 4128-32 Millcreek
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IMMEDIATE DELIVERY—condensing
units, air-cooled, close-coupled with
Tecumseh compressor and motor. Brand
new 1947 production. Prices slashed to
reduce excess inventory. 1/2 HP—\$90.00.
3/4 HP—\$108.00. BERLY MFG. CORP.,
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SERVICEMEN: LIMITED quantity. Three
wire test cords for sealed units. (War
surplus). Metal plate suitable for mount-
ing fuse-capacitor selector etc. Two position
toggle switch rubber plug and insu-
lators clips included. Shipped prepaid on
receipt of \$2.60. Money back guarantee.
CELSON'S SERVICE, 164 Washington
St., Medford 55, Mass.

IMMEDIATE DELIVERY—Jordan 16LL
freezers complete with compressor, \$350.00;
30 cubic foot upright freezer with 1/2 HP
compressor, \$650.00; 20 cubic foot upright
with 1/2 HP compressor \$500.00; Panelectric
automatic ice cube maker, \$350.00; F.O.B.
Cincinnati, BLSD. 20th CENTURY
REFRIGERATION COMPANY, 1630 Wal-
nut Street, Cincinnati 10, Ohio.

IMMEDIATE DELIVERY—new air condi-
tioning equipment. Weathermakers com-
plete with motor, "Freon" coil, etc.
2 ton to 25 ton. SWSI, DWDI, and twin
centrifugal blowers, propeller fans, heat-
ing and cooling coils, evaporative con-
densors, self-contained air conditioning
units, condensing units. CONTROLTEMP
CORP., 236 Butler St., Brooklyn 17, N. Y.

FOR SALE—AC motors 1/2 to 3 hp. single
and 3 phase, list price. Immediate deliv-
ery. EDISON COOLING CORP., 310 E
149th St., Bronx 51, N. Y.

QUALITY BOTTAL fountains; reach-ins,
walk-in boxes—wood, metal; dough
retarders; double duty cases—stainless steel,
porcelain; dairy, florist, bakery cases;
ice cream hardening cabinets; thermo-
pane frozen food cases; milk, sandwich
coolers; stainless steel back bars; with
machines. Equipment made to special
order. FRIGITEMP CORP., 931 Bergen
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1/2 hp.—3425 RPM—3 ph/230 V. (Under-
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dried fir front, spruce interior. Chrome
hardware, metal saddle, finished shellac
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us your requirements. REFRIGERATION
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1 BRYANT MODEL 14 R silica gel gas
fired air conditioning unit with water
after cooler. Excellent condition and
perfect working order. Immediate sale
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EVAPORATIVE CONDENSERS—immedi-
ate delivery. 2 Nevinger—15 ton. 1—
Buffalo Forge—ECC40D (dual circuit). 1—
Trane—KN1516 (dual circuit). 1—Trane—
KN1812. 1—Buffalo Forge—ECC60D. All
available condensers complete with motors,
pump and liquid receivers. F. ROBERT-
SON, 1226 S. 58th St., Philadelphia 43, Pa.

FLOAT REPLACEMENTS. For replac-
ing defective high side floats on all
household units. Regular charging con-
nection, capillary tube setup, internal
strainer and exact mounting plate. Part
#2000—Westinghouse (4 hole plate), and
#2010 (3 hole plate). Part #2020—Gibson
#2030—General Electric (DR-1 &
DR-2). Part #2040—For general replace-
ment (undrilled plate). \$3.75 each.
SEALED UNIT PARTS CO., 3097 Third
Ave., New York 56.

SEALED CROSLLEY TERMINALS. In-
stalled from the outside in a few minutes
without opening the compressor. Corrects
leaky terminals on all Crosley "F-12"
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Installation tool \$1.65. Immediate delivery.
Money-back guarantee. SEALED UNIT
PARTS CO., 3097 Third Ave., New York
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AS IS units available—1/4 HP \$10.00, 1/2
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Frigidaire, Kelvinators, Servels, etc. Also
3 HP Copeland 3 cylinder, and 25 HP
M & E 4 cylinder with motor & controls
and air conditioning coils. SIMON'S
REFRIGERATION EQUIPMENT CO., 763
1st Avenue, New York 17, N. Y.

DOLE PLATES—Immediate delivery on
L10, L11, L12, L13, L14, F15, F17, and F25
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CONDENSING UNITS complete with
motors 1/4-1/2-3/4 HP. Expansion valves,
controls, pulleys, belts, dryers, etc. All
equipment is new in original cartons.
Will be sold at wholesale cost or less.
Write for list prices. ULTRA-COLD,
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1/2 HP UNITS complete with motor. \$98.50.
Other models from 1/4 HP to 1 HP at new
low prices. All units supplied with
motors. Send for catalog 742A. BOX
2405 Air Conditioning & Refrigeration
News.

WEBER FROZEN food cabinets offered
for quick sale at distributor cost. BOX
2414, Air Conditioning & Refrigeration
News.

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MANUFACTURERS' REPRESENTATIVES
wanted by manufacturer of complete line
of nationally advertised air conditioning
and heating coils and blower units.
Exclusive territories available. Experi-
enced agents contacting contractors, engi-
neers, architects, and industrial pre-
ferred. Address BOX 2410 Air Condi-
tioning & Refrigeration News.

FRANCHISES AVAILABLE

A FEW dealerships available. Warren
controlled quality commercial refrigera-
tors. Display cases, beverage coolers,
walk-in refrigerators, reach-in refrigera-
tors, open-type refrigerated cases, and
other commercial items. Write factory.
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Box 1436, Atlanta 1, Georgia.

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BUSINESS FOR sale at inventory plus
\$1000.00. Appliance refrigeration electric
motors, sales and service, stock fair,
Equipment good. Employ 1 motor me-
chanic and one refrigeration mechanic.
Lease 4 years. Good location. Residence,
2 bedrooms, hardwood floors, insulated.
For details call or wire WOODY, 117
West Grand Clovis, New Mexico.

WANTED PRODUCTION man as officer
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finest home freezer on the market under
the most ideal conditions. Investment of
\$15,000.00 will be required. Very unusual
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giving resume of background and per-
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FOR SALE: Refrigeration and electric
appliance business in Carlsbad, New
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sell because of illness in family. Write
address below for full particulars. BOX
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IMMEDIATE DELIVERY
Order Monday—get
Friday! MODEL 35:
one handle; 400 lb.
cap; Ht. 43"; width
16"; 5 x 1" rubber
whs. Oilite bearings. Shipped
from stock. A good small
50-2 hand truck—MODEL
35—600 lb. cap. Ht. 48"; 14 x 7"
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Over 10,000 HANDEES trucks sold by mail on
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pleased. Clip this. Order from HANDEES CO.,
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clearly conceived,
cleverly executed,
for modern installations

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Refrigeration Dealers in
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Announcing our new and improved
"Walk-In Coolers" and "Freezers,"
built of Finest Grade Polished Alu-
minum Alloy or of the Finest Grade of
Kil-Dry Lumber.
Also announcing the newest thing in
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For further details on prices, sizes,
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"Manufacturers of all Commercial and
Home Refrigeration Units."

Every Motor Repair Shop

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6471 Plymouth Avenue, St. Louis 14, Mo., U.S.A.
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If you have Manufacturing facilities, Capital and
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1. Patented automatic fuelless seasons controlled
heating and cooling Air Conditioner or furnace.
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Compressor and Devices.

For full particulars write:

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KRACK
ENGINEERED

UNIT COOLERS
FIN COILS
AIR CONDITIONING

Refrigeration Appliances, Inc.
923 W. Lake St., Chicago 7, Ill.

Unusual Opportunity for SALES REPRESENTATIVES

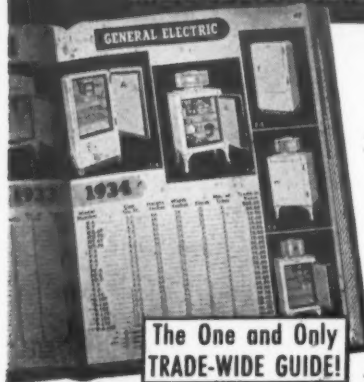
The Eastern distributor of an old na-
tionally known top quality refrigerator
cabinet and case manufacturer has terri-
tories open in the New England states.
We seek men of better than average
sales ability and earnings. Exceptional
opportunity for the right men. Must have
experience in this line. Car essential.
Commission and nominal draw. Please
write giving age, qualifications and ex-
perience in full detail. Box No. 2409,
Air Conditioning & Refrigeration News.

MARSH
Pressure Gauges
Dial Thermometers
★The gauge with the
Recalibrator
Ask for this New
Refrigeration Booklet
JAS. P. MARSH CORP.
2061 Southport Ave., Chicago 14, Ill.

FOR SALE

— IMMEDIATE DELIVERY —
ELECTRIC MOTORS
1,000—1/4 H.P., 110 V, 60 cy., 1750 RPM
BALL BEARING, SPLIT PHASE
RESILIENT MOUNT
SUITABLE FOR USE ON IRONERS, WASH-
ERS, FANS & BLOWERS. \$21.00 ea.
500—1/25 H.P., 115 V, 60 cy., 1550 RPM
SHADED POLE, TOTALLY ENCLOSED, FAN
COOLED, ROUND BODIED. \$10.00 ea.
ADDRESS BOX 2392, AIR CONDITIONING
& REFRIGERATION NEWS

The STANDARD Reference Manual on REFRIGERATORS and FREEZERS



The One and Only
TRADE-WIDE GUIDE!

* Arranged and indexed for quick
reference.
* All appraisals have been revised to
reflect current market factors.
Use the Standard Manual
to identify and evaluate every
refrigerator and freezer accurately.

Bookbound in washable green cloth—320 pages. Pocket Size—4 3/4" x 6 1/4". Price—\$6.00

NOTE—A limited quantity of current (1946) edition still available for immediate delivery.

STANDARD REFRIGERATOR TRADE-IN MANUAL CO. 503 W. 43rd St., N. Y. 18, N. Y.

Please enter my order for _____ copies of 1947-1948 Manual @ \$6.00 each.

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**NEW 1947-1948
EDITION
NOW IN PRESS!**

- More than 1150 photographs
- More than 3300 model specifications
- Authentic trade-in valuations for all household refrigerators marketed since 1928.
- Operating data on Merchandising, Promotion, Reconditioning



'FREON' MESS SHOULD BE BROUGHT INTO THE LIGHT

John H. and Earl Hunter
Valley's Oldest and Largest
Refrigeration House
222 Elizabeth Street
Brownsville, Texas

Editor:
The refrigeration industry is certainly one that is long suffering and patient with the abuses that are heaped upon it. The "Freon" situation is an example. Poor handling, mismanagement, and I am beginning to believe outright crookedness are some of the causes which have led the industry into this predicament. Any other industry in the U. S. would be crying to high heaven for government action, but we are patient little people who put up with it and some way manage to carry the load. I want you to know that we appreciate the article which was run in your June 30 issue. Your paper can best serve the industry now by tracking the whole mess out into the light and let the chips fall wherever they will. I urge you stay on this situation and give it editorial backing as well as complete news coverage.
JOHN H. HUNTER

YOUNGER MEN NEED THRILL OF MAKING TOUGH SALES

D. E. Sanford Co.
1224 Candler Building
Atlanta, Ga.

Editor:
In looking over a recent issue of AIR CONDITIONING & REFRIGERATION NEWS, I see that you have recently published a new book—"One Foot in the Door." Apparently, it is just as timely as was "Great Day Coming." Please send me a copy. I've been watching and taking an active part in this business of Specialty Selling for a long time, and this six years vacation which all salesmen have had has certainly not hardened up any sales muscles. If you have some answers in "One Foot in the Door" for the fellow who is ready to fold up under these relatively soft selling conditions, I want to read it and pass it along to some younger boys who have never had the thrill of getting business when the going was really tough. You will see from the letterhead that I am back in Atlanta. I think it was back in 1927 or 1928 that I had the pleasure of first meeting you when you were just starting your career as a reporter. I have observed

with a great deal of admiration the splendid progress you have made and especially have I enjoyed your splendid editorials on many touchy and, at the time, none too popular issues.
H. A. PENDERGRAPH

STANDARD REFRIGERATORS MADE ROXY INSTALLATION

Standard Refrigerators, Inc.
578 Second Avenue
New York City

Editor:
Please take note of your June 16 issue, page 17 of AIR CONDITIONING & REFRIGERATION NEWS. The above pertains to the installation of "Coke Bar" at the Roxy theatre in New York City. We are quite surprised that Standard Refrigerators, Inc. was not mentioned, inasmuch as we did the entire refrigeration installation on this job. We also designed and originated this type of installation, this being the first of its kind in the city. All in all, we are very much perturbed that our name was not used in connection with this matter; after all, the idea of the paper is to promote good will in the refrigeration and air conditioning industry.
GEORGE L. MANDOT

ECONOMIC PSYCHOLOGY IS STILL 'FAR FROM NORMAL'

Denton, Texas

Editor:
Please don't intimate with your accounts of Public Analysis, Inc., Boston sleuths and phony "shoppers" that public economic psychology is getting anywhere near normal. From the president on down there are still about 47% of the people who must be shown that insolence, arrogance, wastefulness, and extravagance, in a word "Rooseveltism," are not part of the American picture. There is still a strong undertow whose title should be "something for nothing." But keep fighting and in slow time we'll live over it.
A. F. EVERS, JR.

HEAT PUMP PROMISES BIG NEW HOUSEHOLD MARKET

Maintenance, Inc.
1212-1214 Steuben St.
Utica, N. Y.

Editor:
The article on Hotpoint's experimental "heat pump" water heater was very interesting. After 20 years or more of passing the "heat pump" or reverse cycle ideas as a joke, the interest being presently shown in its possibilities, using the earth for a heat source, is in my humble opinion, the small opening in the door to greater possibilities in all-year air conditioning from the refrigeration plant. Development of this idea can bring all-year air conditioning down to the cost level where every new house in the land can be so equipped. What a market! Let's hear more on such possibilities.
O. L. FUSCH, Vice President

MEXICO CITY FIRM BIDS FOR DISTRIBUTION RIGHTS

"House of Carmina"
Arteage No. 17
Apartado 25
Acapulco, Gro., Mexico

Editor:
I have just started a furniture store in Mexico City with a wholesale department for all the Mexican Republic, as I want to furnish my customers with a complete line of all the products they need. What I want is to be a distributor for some factory for the following articles: refrigerators, radios, typewriters, and sewing machines. I want to deal direct with these factories, without any intermediaries or commission agents. I know that you are in a position to supply all of these articles and give us exclusive distribution. I have a reasonable amount of capital for the establishment of this business in Mexico.
JOAQUIN TEJEDO

OVER 13,000 BTU PER HOUR!

AT +40° F.

Rated under A.S.R.E. standard conditions with Freon 12 refrigerant at ambient temperature of 90° F. Capacity obtained without the use of a heat exchanger and with compressor operating at only 400 rpm.

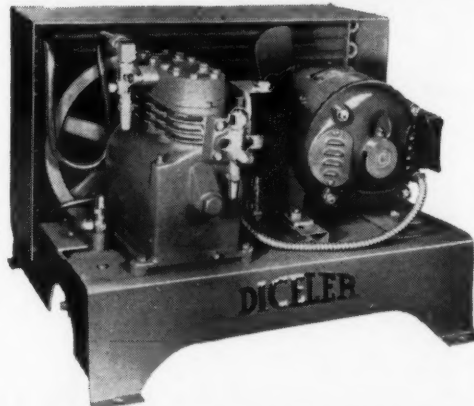
WITH THIS

DICELER

MODEL 3900FA—1 H.P. AIRCOOLED CONDENSING UNIT

Complete Capacity Ratings
For This Model

Evaporating Temperature	B.T.U. Per Hour
+40°	13,158
+20°	9,658
+5°	7,659
-10°	6,590



OTHER MODELS

Equally efficient and most competitively priced, available for prompt delivery in sizes of—
1/3, 1/2, 3/4 and 1 H.P.

AIRCOOLED AND 3/4 & 1 H.P. WATERCOOLED

Watercooled units equipped with the new HM two stage cleanable condenser.

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GENERAL MACHINE & MANUFACTURING CO.
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FIRST IN WHEAT PRODUCTION
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ABUNDANT WATER
DEPENDABLE RAIL TRANSPORTATION
NATIVE BORN WORKERS
MODERATE LIVING COSTS

Kansas *

* One of a series of advertisements based on industrial opportunities in the states served by the Union Pacific Railroad.

KANSAS—almost in the exact geographical center of the United States; an important factor to industries serving nationwide markets.

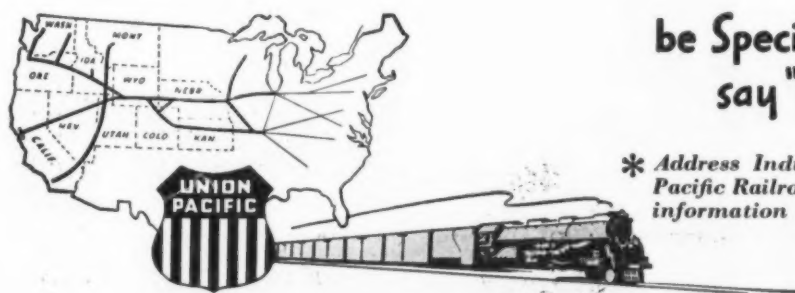
Agriculture is king. Kansas normally ranks first in wheat production. In addition to grains, vegetables and fruits, a large part of farm income is derived from livestock and poultry.

Kansas industry keeps step with agriculture. There are approximately 2,500 manufacturing and processing establishments. Over four mil-

lion tons of coal are mined annually. Here is the largest natural gas field in the world. Eighteen principal rivers with two great watersheds provide an abundance of water. The population is 97 per cent native born.

* * *

Kansas... the hub of a rich market; a treasure chest of natural resources with dependable labor; outstanding public health record; moderate living costs; and excellent transportation over Union Pacific rails.



be Specific -
say "Union Pacific"

* Address Industrial Department, Union Pacific Railroad, Omaha 2, Nebraska, for information regarding industrial sites.

UNION PACIFIC RAILROAD

THE STRATEGIC MIDDLE ROUTE

GENUINE MAYFLOWER AIR CONDITIONERS

Air Conditioners Licensed Under U. S. Patents No. 2,048,246 No. 2,055,529

MAYFLOWER PRODUCTS, INC.
13 S. 5th St., Richmond, Ind.

PAR REFRIGERATION EQUIPMENT

Tops in PERFORMANCE ECONOMY and EFFICIENCY



By Comparison - You'll Buy PAR
General Office, Toledo 3 - Factory, Delaware, Ohio, U.S.A.

GRUNOW AUTHORIZED DEALERS ARE MAKING MONEY!

Build up your new box sales now with Grunow Service Business!

Write for Authorized Service in your territory.

GRUNOW AUTHORIZED SERVICE, INC.
4313 W. Fullerton Ave., Chicago 39, Ill.

Coal Wage Boost Will Affect Steel Prices --

(Concluded from Page 1, Column 2) ering a change in prices. He answered:

"Yes, steel companies are now thinking of raising their prices. They have no alternative. Necessity requires it in the light of the increased wage bill of last April and the higher cost for coal. Steel prices are now being carefully studied from a product standpoint. We are reviewing the selling price, product by product, but we don't know yet what the adjustment will be nor when the new schedules will be instituted.

"Any price adjustments made will not include or be in anticipation of higher freight rates, however. The freight rate is not in the picture now."

The effect of such a steel price increase isn't hard to visualize.

C. G. Frantz, president of Apex Electrical Mfg. Co., declared last week that prices "almost inevitably" would have to keep pace with costs. More expensive steel, said he, would ultimately mean higher prices for steel products.

Roy C. Ingersoll, head of the Ingersoll Steel division of Borg-Warner Corp., had the same thing to say about future prices of household appliances. Following a meeting of company heads in Detroit, Mr. Ingersoll indicated that one of the principal subjects had been the increasing of prices on items with an already too-narrow profit margin.

"Labor now accounts for the major percentage of our costs," he declared. "Add the increases likely to develop in rail rates, plus steel and coal... and prices will have to increase for finished products. Our break-even point has soared dangerously in the last two or three months alone."

Norris Stamping & Mfg. Co. of Los Angeles expounded a similar view.

On the brighter side, however, two appliance manufacturers in Los Angeles claimed they would absorb steel price increases.

First steel company to take the step is the Worth Steel Co. of Claymont, Del. This firm is reported to have already increased the price of steel plates. Similar adjustments in the rest of the steel industry are likely to follow, but not until the end of the month when results of the first half-year's operations have been weighed.

Some steel analysts believe that the coal wage boost and added welfare benefits will raise steel industry costs about \$43-\$63 million annually.

Conditioned 'Lounge' Boosts Traffic for Florida Drug Store

WEST PALM BEACH, Fla.—Seeking a means to build up traffic into the store during the ordinarily "dead" summer months, the management of Newberry's Pharmacy, new \$35,000 prescription store at 308 S. Dixie Highway, here, has installed a comfortably air conditioned lounge in the center of the store.

Pharmacists H. Grady Stephens and Kent Taylor, partners in the store, give full credit to the air conditioning for the fact that summer sales volume of prescriptions, sundries, cosmetics, etc., have jumped substantially. The store, incidentally,

is one of the first in the nation to install plenty of comfortable seating for customers and to invite downtown shoppers to come in and relax.

The lounge is an 18 x 20 foot space in the center of the floor, with a gray broadloom carpet, four red leather chairs and a couch.

The lounge, lavatories, and the rest of the store are cooled by a 15-ton York remote-controlled unit, with a Minneapolis-Honeywell thermostat which keeps the interior at a pleasant 80° F. with 50% relative humidity. Special moisture-extracting equipment is built into the system to remove upwards of three quarts of water per hour from recirculated air.

To accommodate a \$5,000 inventory of biological supplies such as penicillin, hormones, anti-toxins, etc., the Newberry Pharmacy has also installed a 4-door, reach-in refrigerator of 28 cubic feet space.

Specialty Organization Urged on Airtemp Outlets

BRIDGEWATER, L. I.—The need for a specialty merchandising organization in each individual dealership was outlined to associate dealers of Chrysler Airtemp in Bay Shore, L. I. by J. A. Clarke, Airtemp district representative in New York at a special meeting sponsored by Barringer and Barrett, Four Star dealers for the Bayport area. The meeting was held at the Riviera Club, Bridgewater, L. I.

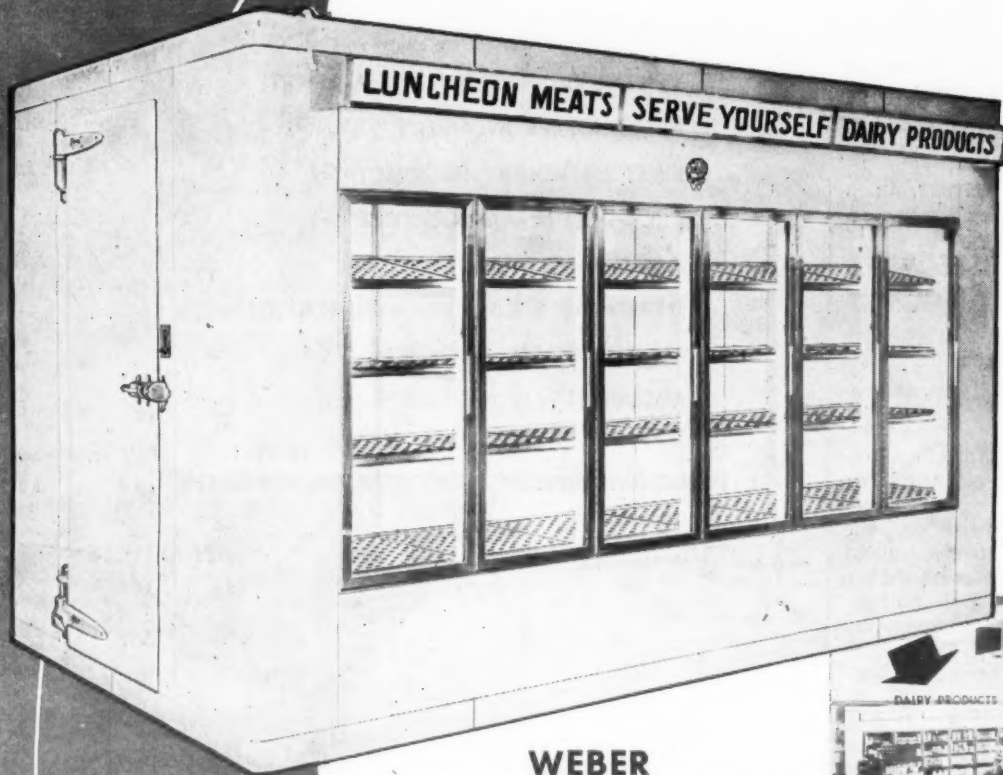
Mr. Clarke also outlined the necessary procedure in setting up such an organization.

William Barrett then explained the various features of the equipment on display.

Another Unusual Development by

WEBER

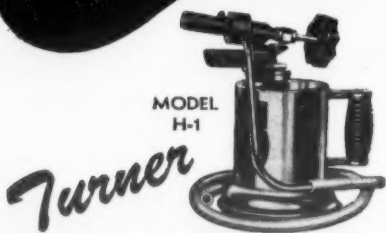
Designed for modern merchandising, here is an unusual development in self-service refrigerated storage. A product of Weber engineering and research this equipment is designed to display more and sell more.



WEBER
WALK-IN REFRIGERATOR
with new full-view
self-service doors



**DETECTS
EVEN THE SMALLEST
GAS LEAK
IN "JIG TIME"**



**HALIDE REFRIGERANT
GAS LEAK DETECTOR**

Find leaks involving all chlorinated hydrocarbon refrigerants quickly and accurately with Turner's highly-sensitive Model H-1 Halide Detector. This blowtorch-type burner employs a simple chemical principle... flame becomes green whenever gas is present in the area surrounding a defective cooling unit. Designed and constructed throughout for long, dependable service. Has a flexible exploring tube for easy probing in "hard-to-get-at" places; holds one pint of alcohol fuel; measures 8" from handle to tip of burner x 7 1/2" high x 4 1/2" wide; can also be used as a blowtorch.

AVAILABLE FOR IMMEDIATE DELIVERY
Made by the manufacturers of nationally-known Turner Blow Torches.

THE TURNER BRASS WORKS
Since 1871

**PURO
Electric
WATER COOLERS**

BRANCHES IN PRINCIPAL CITIES
MAIN OFFICE
440 LAFAYETTE ST., N.Y. 3, N.Y.
**PURO FILTER CORP.
OF AMERICA**
DRINKING WATER SPECIALISTS
FOR 50 YEARS



WEBER

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Pioneers in Commercial Refrigeration Industry